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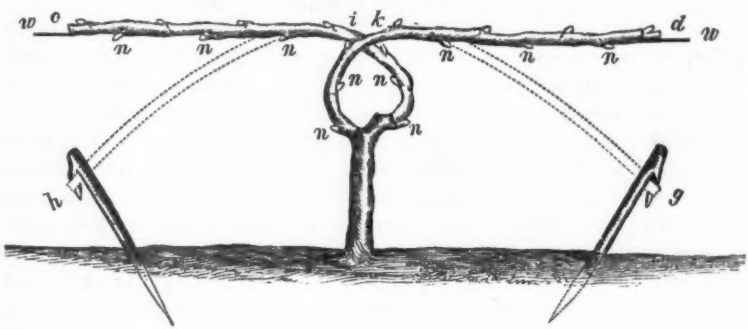
Hints on Grape Culture.—XX.

WE now propose to finish our last article, relating to the formation of arms. Our present description, it must be borne in mind, has special reference to the vineyard, though it will do for the garden just as well; but for the latter we have another mode of forming arms, which, though somewhat tedious, is more symmetrical in form, and sufficiently interesting to fix the attention of the amateur. It would always be the neatest mode for the garden, if we could only circumscribe a little the desire to plant a vine to-day and gather a full crop of grapes to-morrow. The process will be described in its place.

We have directed the arms to be cut in to at least two feet, and much shorter if the cane is not stout. We have also directed the arms to be bent to a curve, and temporarily secured in this position. Let us now refer to the accompanying illustration, a "portrait" of one of our own subjects, three years old, drawn to a scale of one inch to the foot. We have selected a short-jointed variety by way of illustration; all the lower eyes being rubbed out, those above will be about six inches apart. This will be nearly an average for the short-jointed kinds, though some will be seven and others eight inches, and even the same variety will vary a little in the length of the joints. The buds are sometimes closer the first year than the second. Precise exactness, therefore, need not be looked for in this particular. The buds, however, should in no case be left closer than six inches; neither should they be wider apart than twelve inches. It may be adopted as a general rule, as heretofore stated, to rub out every other eye in the short-jointed kinds, and leave all the eyes in the long-jointed kinds.

Let us now recur to the engraving, where the buds are six inches apart. *c* and *d* are the arms. *h* and *g* (dotted lines) show the manner of bending them to induce the buds near the trunk to break strong. We have stated that the practice

is to bend the arms in the direction in which they grow, but that we have found it better to bend them in reverse order, as shown in the engraving, where it will be seen that the arm on the left is bent to the *right*, and that on the right is bent to the *left*. We find, in practice, that when the arms are thus bent the eyes near the trunk break stronger and more uniformly; and herein theory and practice agree precisely. To bend the arms, the trunk must first be securely tied to a short stake or to the lower wire. The arm must then be bent gradually and carefully; if it is stout, it must be bent carefully all along with the thumbs and fingers, just as we bend a stout wire into a curve. It will probably "snap and crack" a little, but this will do no harm, though it may frighten the novice. In bending the arms, first tie them to the wire at the points *i* and *k*; then take hold of the ends, bend them down, and secure them with pegs, in the manner shown by the dotted lines *h* and *g*, where they are to remain till the new shoots have grown about



three inches, when they are to be tied to the bottom wire. In doing all this, the buds must be kept on the upper side of the arm, as before described; and this is easily done with ordinary care, though the novice may at first find it a little awkward, which is only a polite way of saying that he may at first be a little awkward himself. We hope, however, that we have made the matter very plain. A little care must likewise be exercised in getting the arms in good position at the point where they cross each other; if any difficulty is experienced, tie them at several points near the trunk. A little practice, however, will overcome the difficulty.

The arms are bent in the ordinary way with somewhat less trouble. In this case, the arm *d* is bent in the direction *c*, and the arm *c* is bent in the direction *d*; or, in other words, they are bent in the direction in which they grow. In other

respects, the treatment is precisely the same as that described above. All the buds marked *n* must be rubbed off; the rest must be retained. The last bud on the arm must be on the upper side. The arms in the illustration are one foot and nine inches long. The wire, *w*, is fifteen inches from the ground. The engraving being drawn to a scale, the reader, by using a rule, can ascertain the proportions of all the parts. We advise him to study it attentively.

LANDSCAPE ADORNMENT, NO. XXVII.—CONTRACTING.

BY GEO. E. WOODWARD, CIVIL ENGINEER & ARCHITECT, NO. 37 PARK ROW, NEW YORK.

THE execution of ornamental landscape work by contract is a subject that admits many arguments on both sides. It presents many advantages to the proprietor engaged in other business, relieves him from anxiety, and informs him of the precise cost. If he deals with reliable men, the result of such operations is satisfactory; but if he bargains for work below a fair price with those who consider present profit only essential, he will soon find out that he has paid a round price for shabby work. That work can be done honestly, fairly, and economically by contract, there can be no manner of doubt; but one must first rid himself of the idea that he can get good work done below the current rates, or that the lowest bid is the cheapest. A contractor, like any other business man, pursues his business for the purpose of making money out of it, and it must be evident, on the least reflection, that if he takes work below its value, he must intend in some manner to deceive. A few exceptional cases might occur, where it would be deemed better to execute works honestly at low rates, than to keep idle horses or disband well-organized laboring forces; but such opportunities can not be relied on.

It is a mistake to suppose that the business of a contractor is one that can be taken up at once without previous training; it is a pursuit to which one should be educated, and one which requires a man of intelligence. The great evil of contract work lies in the want of discrimination among those who have work to be done, and the contractor is not judged by his character or his ability, but the question is, has he the means and forces to carry out his proposals, and does he propose to do the work at the lowest price? Such is the usual practice, and such practice is certain to bring contract work into disrepute. Those who wish first class, substantial work, reject the contract system, and it is considered among dealers as a strong recommendation to a house to say that it was built by day's work. There is no plausible reason that could be advanced why a house, a road, or work of any kind that can be planned and specified, should not be as well executed by contract as by day's work. There is a per centage of gain in systematizing work and superintending day laborers, that a salaried foreman not interested

pecuniarily in results, invariably overlooks, and that per centage amounts to a handsome profit, desirable to an intelligent man, who could fairly execute the same class of work for the same sum.

It is customary to hear persons of limited experience scout the idea of doing Landscape work by contract, simply because it is a work of art. They do not comprehend that a contractor (unless he be also an artist) has nothing to do with design. No one denies that architecture is a fine art; yet all know that it is an every-day matter to put up buildings by contract that embrace fine artistic effects; but no one thinks of holding a contractor responsible for those effects. He fulfils his obligation by reproducing in real materials the design which is furnished him on paper; and so long as he follows instructions, he must be successful. What is true in architecture is equally true in all branches of construction; any thing that can be planned and specified is a subject of contract.

It must be evident to a careful observer, that as we go up the scale from rough work to that which is polished and beautiful, we must in the same ratio look for increased intelligence and talent in the person who executes. A contractor should be selected who has both ability and experience in that department of work which he proposes to undertake, and who can readily comprehend both the plan and specifications that relate to it; then if he be a man of integrity, and receives a fair price for his services, the results will be satisfactory.

There is a growing desire among most business men who are carrying out extensive improvements, to have an accurate knowledge of the cost before any thing is done; but there is likewise a popular impression that in landscape work it can not be definitely ascertained. This is owing in a great measure to the fact, that but few who contemplate improvements either know what they want, or what effects their grounds are most capable of producing. The moment they find out either by professional aid or otherwise, precisely what is required, the further solution of the problem is a simple matter. It is just as easy to give the sum required to grade and beautify one's grounds, as it is to build a house; but there are in most cases so many more facts required, so much more labor necessary, and so little competition, that estimates of the value of landscape work must be made for a consideration, and not, as is usual in building operations, for a possible chance of being the successful competitor.

Then, again, but few novices in the higher grades of country life have just ideas as to the values of work; and when they get a fair bid for honest work, treat it as an extortion; and the fact that they can get bids for the same work at half those prices confirms the opinion first formed. Planting trees by contract seems, at first thought, somewhat absurd; but experience shows us that it can be well done, if done by those who take pride in their reputation; who do their work in such a manner that they can refer to it, and who pursue their business with the intention that it shall honor them; yet every one knows that a tree can be set out at almost any price, and there are but few that can be convinced that among

all things that are best, when well done, the planting of a tree should be included. It is not the nurseryman's fault, but the mistaken notions of economy every where prevailing. If, in planting operations, men would do well what they do, and leave undone that which they would do cheap, it would be an actual saving of money and annoyance.

To do work successfully by contract would require the employment of men of ability in that department of work required; they should be men of integrity, and a fair price should be paid. Such men can always be found by making the proper inquiries.

STRAWBERRIES—PLANTING.

In our last two numbers we gave some extracts on Strawberry Culture from Dr. Grant's *Landmarks*. We now make an extract from Mr. Fuller's *Strawberry Culturist*, giving his views in regard to the time and mode of planting.

"Choose cloudy weather for planting, if possible. Draw a line where you are to put the row of plants, keeping it a few inches above the ground, so that you may plant under the line; that is much better than to let the line lie on the ground, for then it will be in the way of the transplanting trowel; spread out the roots evenly on every side; cover them as deeply as you can without covering the crown of the plants; press the soil down firmly around them with the hands.

"If the weather should prove dry, give them a good soaking with pure water (no mere sprinkling will do) as often as they require it, which will be as often as the foliage droops. The rows should be two and a half feet apart, the plants one foot apart in the rows. When pistillate varieties are used for the main crop, then every fifth row must be planted with a hermaphrodite variety, for the purpose of fertilizing the pistillates. Pistillate varieties will not bear alone, nor will they bear a full crop of perfect berries unless abundant supplies of perfect flowering varieties are placed in close proximity. Let no weeds grow among them, and stir the soil as often as possible; the oftener the better. We know that some cultivators assert that there is much injury done to the roots by frequent hoeing; but we have never found the plants as much injured by hoeing or forking among them as they were by neglecting to do either.

"Take off all runners as they appear, so that all the strength of the plant shall be concentrated, and not distributed among several, as a dozen small plants will not produce as much or so fine fruit as one good strong one. When plants are wanted, make a separate plantation for that purpose.

"At the approach of winter, the entire surface of the soil, plants and all, should be covered with straw, hay, or some similar material, to the depth of one inch; the object being not so much for the purpose of keeping out the frost as to prevent

the frequent freezing and thawing during the early part of winter and the approach of spring. So soon as the plants start in the spring, the covering should be pushed aside, so as to allow the plant to grow up through it. The question is often asked, whether it is necessary to cover the hardy varieties in this locality during the winter? and if we should judge from the difference in the appearance of the plants in the spring, we might doubt the expediency of such a practice; but I have found it highly beneficial to cover all varieties, having tried several experiments, the results of which were, that on an average we obtained about one quarter more fruit when the plants were covered than when they were not.

"The embryo fruit buds are formed in the fall, and are often injured during the winter and spring, and of course if there are but a few fruit stems put forth, there is but little call on the plant to support them, and consequently the leaves have more food.

"Usually the plants, grow strong or weak in proportion to the quantity of fruit they bear. This would often lead cultivators to suppose, from the luxuriant growth of the plants, that covering was of no benefit, if not positively injurious.

"Keep off all runners at all times, and pull up all weeds that come through the mulching. No stirring of the soil is needed if a good depth of mulch is sustained. It will generally be necessary to add a small quantity of mulch every fall, depending, of course, upon the nature of the material used. Salt hay is a material that is much used near New York, and it is cheap, lasting, and is easily applied; but straw, hay, carpenters' shavings, leaves, tan-bark, etc., are all good. Strawberry plantations that are kept well mulched, and freed from weeds and runners, will last for many years, depending, of course, somewhat, upon the variety planted and the nature of the soil.

"On very dry or sandy soil it is well to mulch the ground very soon after the plants are set out, or so soon as they take root in the soil, as there is but little danger of being troubled with weeds the first season, and the mulch keeps the earth moist, a thing which it is very difficult to accomplish in any other way.

"*Garden Culture.*—The same direction given for field culture of the strawberry is applicable to the small garden, with the exception of the arrangement of the beds; these should be four feet wide, planting three rows in each, placing the plants eighteen inches apart each way; this will leave six inches margin between the outside row and the walk, which should be two feet; this gives three feet between the plants, of parallel beds. This is none too much space between the beds for standing room to gather the fruit; and if different varieties are grown in beds side by side, a less space than three feet would increase the danger of the plants running from one bed to the other. Although no runners should be allowed to grow, all of us will sometimes become careless and neglect to keep them off; and mixing the plants should be guarded against, if any thing like good culture is attempted.

"When pistillate varieties are grown, they should be planted in alternate beds

with other sorts, but never plant both kinds together in the same bed. Mulching the beds should be attended to the same as in field culture; and when it is convenient, it is well to remove the mulch after the plants have done fruiting, and fork up or hoe deeply the ground between the plants, and then mulch again.

"All the different operations by which the fruit may be enlarged or the quantity increased, such as watering with pure water, or with liquid manure, guano, sal soda, etc., will suggest themselves to the observing cultivator.

"When a strawberry bed begins to fail, it is best to plant new beds on new soils, and when the old beds are destroyed, the ground on which they were should be planted with some other crop, and not again planted with strawberries for two or three years.

"*To produce Large Fruit.*—To grow a few large berries, it is only necessary to select, so soon as you can after the fruit sets, three or four of the most promising berries, and pick off all the rest, and then not let the plant want for moisture or food until it is ripe. To grow large fruit of the Alpine strawberry, it is best to raise new plants from seed every season, letting them fruit but one season, and then replace them with new plants. This class of strawberry reproduces itself from seed without any considerable variation."

REVIEW OF THE SEASON IN EGYPT.

BY A. BABCOCK, UNION CO., ILL.

The strawberry, peach, pear, apple, and quince have done well in South Illinois the present season. The strawberry suffered somewhat from drought in some localities, yet still, on well-prepared ground, yielded good crops.

Strawberry growing is in its infancy here. The largest crops, as regards quantity and *size*, were grown on soil deeply stirred and pulverized, and thrown into small ridges with a one-horse plow. The plants were set on the apex of the ridges, and the surface between them heavily mulched. All weeds were destroyed and runners kept off. The ridges should be about three feet apart, and raised some six inches above the general surface of the ground. A mulching sufficiently thick to keep down all weeds can then be applied without danger of smothering any plants. I would call the attention of strawberry growers to this mode. It has proved very satisfactory with me.

The peach crop was a bountiful one in every situation, on low as well as high ground; but that busy "little turk" was indeed busy "making his mark" upon the young fruit; the value was thereby lessened in quality and quantity about one fourth or more.

Pear trees, both standard and dwarf, have made a splendid growth of wood; about one fourth more than the same sorts in New York with the same culture.

The older well-known sorts, such as Bartlett, Seckel, White Doyenné, Angoulême, Louise Bonne, on quince roots, bid fair to do extremely well here, the size and appearance of the fruit being all that one could desire. Of their ultimate success on their own roots it is too soon to speak, although we have every reason to believe they will succeed well. No blight as yet.

Young apple trees make a rampant growth of wood, and require summer pruning to check them, and cause the formation of fruit buds; otherwise some sorts become large trees before showing fruit. The growing of early apples for the northern market bids fair to pay well.

Quinces make a good healthy growth: come early into fruiting; bear fair crops regularly of large-sized fine fruit; and last, though not least, sell well in Chicago, as they were quoted in Chicago papers in fall of 1860 and '61 at $7 per barrel. The most prolific bearer yet fruited here is "Van Slyke's Seedling," from New Jersey, I believe.

We have had a fair supply of rain in Egypt the past summer, pretty well distributed through the season. The crops of corn, cotton, sweet potatoes, tobacco sorghum, &c., are considerably above an average of the last four years.

[A "review" modestly but admirably done. We could wish to see many more just like it. We have written to several friends for articles just like this. We can not write to all, and therefore take occasion to say here, that we shall be very glad indeed to have reports like the above from all sections of the country. They furnish important material for the pomological history of the time, which should be put upon record for future use; besides, when properly prepared, they enable us to judge pretty accurately what varieties of fruits succeed generally as well as sectionally; and they are useful in many other respects. Let each one, therefore, who is in a position to gather facts, do his might towards "making history." Mr. Babcock's method of growing strawberries presents much novelty. It manifestly saves labor, and should be tried by those who grow this fruit in large quantities. The name of your quince is Rea's Seedling. It originated at Coxsackie, N. Y., and is a superb fruit. Let us hear from you again soon.—Ed.]

THE CHERRY, WITH A DESCRIPTIVE LIST.

BY E. MANNING, HARRISBURG, OHIO.

As the present season has given a good cherry crop in most parts of the country, and as most persons are under a mistake concerning this superb fruit, I propose to give my experience in its cultivation at this place.

I cultivate the cherry both on the Mazzard and Mahaleb stock, in about equal numbers, with pretty good success. But, as a general rule, my losses have been five times greater on the Mahaleb stock than on the Mazzard. All the varieties

I have tried on the Mazzard stock do well, except the Black Tartarian, which has so far proven an entire failure on the Mazzard. It appears, however, to do pretty well on the Mahaleb stock. Among sixty-five varieties which I grow on my grounds, this is the only exception.

My soil is common upland clay, with a calcareous subsoil. Position mostly northeast, though some are on a southern aspect. I have been but little troubled with the bark bursting, only in the case of the Black Tartarian. The only malady that has infected my trees appears to be a kind of blight; the bark on certain limbs, and sometimes on the whole tree, turns a dark brown, killing the whole limb or tree outright, as the case may be. The disease is confined almost entirely to those on the Mahaleb stock.

I now propose to give you my experience on the best varieties; and should I differ from my horticultural friends elsewhere to some extent, I have only to say, my descriptions are only for this place.

American Heart, 1st size, 2d quality. Very productive.

Downton, 1st size, 5th quality; destitute of flavor; rather bitter. Entirely unworthy of cultivation.

Late Bigarreau, 1st size, 2d quality.

Burr's Seedling, 1st size, 1st quality.

Manning's Mottled, 1st size, 2d quality. Very productive.

Elkhorn, 1st size, 4th quality; bitter; destitute of flavor. Unworthy of cultivation.

Napoleon Bigarreau, 1st size, nearly first quality. Very beautiful and valuable for market.

Mezel Bigarreau, 1st size, 1st quality. Tree slow grower.

Black Eagle, 1st size, 1st quality. Rather shy bearer.

Great Bigarreau, 1st size, 1st quality. Very fine.

Rockport Bigarreau, 1st size, 1st quality. Very productive. Ripens next after Purple Guigne. One of the most valuable.

Red Jacket, 2d size, 2d quality. Rather late.

Powhattan, 1st size, 1st quality.

Pontiac, 1st size, 1st quality. Valuable.

Osceola, 1st size.

Delicate, 2d size, 1st quality. Very beautiful.

Gov. Wood, 1st size, 1st quality. Splendid.

Black Hawk, 2d size, 1st quality.

Kirtland's Mary, 1st size, 1st quality. Very fine. Ripens just after the Rockport Bigarreau.

Kirtland's Mammoth, 1st size, 1st quality. Rather shy bearer.

Ohio Beauty, 1st size, 1st quality. Very beautiful.

May Duke, 1st size, 2d quality. Ripens very irregular; hardly second early. Worthy only of amateurs' grounds.

Belle d'Orleans, 2d size, 1st quality. Early.

Elton, 1st size, 1st quality. Very splendid. Worthy of all that has ever been said of it.

Bigarreau or Yellow Spanish, 1st size, 1st quality. Very fine and rich.

Reine Hortense, 1st size, 2d quality. Not as late as generally reported. Very tender.

Black Tartarian, 1st size, 2d quality. Very splendid; one of the best.

Early Purple Guigne, 1st size, 1st quality. The earliest of all cherries I have tested. Ripened the present season, May 28.

Knight's Early Black, 1st size, 1st quality. Second early. Very tender.

Gamdale, 2d size, 2d quality.

Toupie de Herard, 1st size, nearly first quality. May yet prove so.

Florence, 1st size, 1st quality; late. Very beautiful, and valuable.

Bigarreau Gabalis, 1st size, 1st quality. Resembles the Black Tartarian, but larger, of the most exquisite flavor. The best of all cherries I have ever tested.

Coe's Transparent, 1st size, 1st quality. Very fine.

Brant, 1st size, 1st quality. Fine.

Doctay, 2d size, 1st quality. Late.

Belle de Choisy, 1st size, 1st quality. The best of all Dukes.

Waterloo, 1st size, 1st quality. Very fine.

Black Bigarreau of Savoy, 1st size, 1st quality. Quite late and valuable.

Large Heart-Shaped Bigarreau, 1st size, 1st quality. Splendid.

Hovey, 1st size, 1st quality. Fine.

Cumberland Spice, 1st size, 1st quality. Nearly the same size and appearance of the Black Tartarian; richer and higher flavored.

Belle Magnifique, 1st size, 2d quality. Rather late; one of the best Dukes.

Early Richmond. Not early. Desirable only for variety.

Besides, I have the De Planchary, Late Duke, Latest Duke, Royal Duke, Archduke, Ramsey's Late Duke, which are desirable only for variety.

Several of my varieties have not as yet fruited, so as to enable me to speak of their merits.

[Mr. Manning has a large and fine collection of Cherries. Some of the names, however, we regard as synonyms. There seems to be a great unanimity of opinion among growers in regard to the quality and value of such kinds as Gov. Wood, Elton, Black Tartarian, Belle de Choisy, and others. We suppose that some of our readers will not agree with Mr. Manning in his estimate of the value of the Mahaleb as a stock; not because the Mazzard is not most valuable in his locality, but because the Mahaleb, as a general thing, is found to accomplish very well the purpose for which it is used; that is to say, for dwarfing and early fruiting. Mazzard stocks are best for the orchard. There are many of our readers who might do the public good service by giving, like Mr. Manning, the results of their experience in the culture of the Cherry.—Ed.]

FRAUD IN SEEDS.

BY ONE WHO KNOWS BEANS.

Mr. Editor: "Weeping Sufferer" has struck a *lead*, as we say at the mines, which I hope to see followed up. He is after the fraudulent nurserymen. May he lack no recruits to join in the hue and cry, until they skedaddle across the mountains into the Pacific, and take up their abode among their Chinese brethren. A pretty sure way to get a good fruit tree from a known plant-swindler is to contract for some worthless sort which is so out of date as not to be had. He, determined not to be outdone, puts in something good, in order to satisfy his evil disposition by supplying an article not contracted for. To illustrate:

Several years ago, I had the misfortune to allow a person of this class to become indebted to me. He was apparently a man of large means; but I knew that he never paid his contracts except in nursery-stock. I had resolved to cultivate fine Pears. I knew he had some young dwarfs, just budded with good varieties. I also know, if I contracted for these, I was quite sure to get those not budded at all, or, if so, of worthless sorts. I therefore proposed to take in payment, Summer Bell, Summer Bon Chretien, and Bergamot Suisse, as being of old and tried sorts. My nurseryman was at first a little non plussed; said they were getting very scarce; great demand; large orders; becoming popular; doubts as to newer varieties succeeding; dwarfs an experiment; might not succeed; rather believed they would; knew a party that had a few; held at a high figure; lived a hundred miles up the country; expensive going there; mail but once a week; could get them to oblige a friend.

The result was, I contracted for the number of trees wanted, and had the satisfaction of knowing that they were dug out on his own grounds, from the recently budded varieties, and have this year enjoyed Beurré Giffard, Duchesse de Berry d'Eté, Stevens' Genesee, etc., to the gratification of myself and family, feeling satisfied that if I had contracted for these varieties, I should have been *choked* off from Pear culture entirely, and have been ready now, with many of his customers, to declare Dwarf Pears a failure. Had your correspondent tried my plan, he probably would have got Delaware instead of spurious Dianas, and had less reason to "weep" or "suffer" from the imposition. There is this difference between us: I had my eye teeth cut a quarter of a century ago; his *canines* are just appearing. But, aside from all badinage, why do not the nurserymen unite in their might and put down these few pretenders who throw such discredit on their profession? What if a rascal or two has made money by cheating? they have prostituted talents, which, honestly applied, would have quadrupled their worldly goods, and laid up treasure in heaven at the same time. What their chance for the future is, I will not presume to say. Honesty *is* the best policy. I know more than one nurseryman who has tried it successfully; not

he, however, who declines to make restitution for a fraud, or *he* who refuses to pay his honest debts under the plea that he "can not claim any thing as his own," because it has been previously legally! transferred to his wife or son.

But, Mr. Editor, there is another grievous evil which your patrons are suffering from yearly, that you alone can correct by holding the parties up to scorn and ridicule. The amount involved is so small that each prefers to "bear the ills we have, than fly to others that we know not of;" that is, to put up with a small fraud rather than to go to law for redress. I allude to the frauds in seeds. The nuisance has, however, become so extensive, that "it is time to speak." Every country store, and every dry goods, grocery, and drug store in all our country towns are loaded down with garden and other seeds, which often remain over from year to year, and have no vitality. These are put up by unknown persons, living in obscure places, so that they can not be hunted up or exposed. This might be corrected, if in each country town some one person of character would undertake the seed business, and assume the responsibility to sell none but good seed, purchasing their stock from well-established houses in the larger cities, or from men of character who grow them.

The frauds in seeds affect a class of people who are less able to bear the disappointment, than those who own large tracts of land on which to plant orchards and vineyards; they are the laborers, market gardeners, mechanics, and men of small income, who cultivate patches, and who wish their families to enjoy vegetables, flowers, and small fruits, and to whom it is a serious loss to buy old beans or onion seed, which they find, when too late, will not vegetate; or who, if he can spare fifty cents for a dozen Japan Pink seed, is terribly disgusted to find that what he bought for Dianthus Chinensis Heddewigii Flora Plena Hybridus Imperialis, proves to be but a common Pink.

They also affect a class that can not well gird on the sword to combat the common enemy, and who, unfortunately, do not often enough know their own power to wield the pen in self-defence. I mean the ladies; and these, you and I, Mr. Editor, are bound to protect. One who assumes to *oversee* my doings, has in her border purple and white Candytuft; seeing "scarlet" advertised, remits the requisite number of postage stamps, and receives white and purple mixed. She can not be made to comprehend how these colors can be combined to make scarlet, red being an original color. From another she orders "Petunias, mixed," for bedding, which all come up of one color. Again, six Dahlias, described in catalogue as "very beautiful, making a fine assortment for a small border," prove to be all a dingy brown, and so near alike that an expert can see little or no difference, and no one can discover any beauty. But the crowning annoyance was the reception of a dozen nicely folded papers, labelled "German Asters," in which not a single seed could be found. A dollar's worth of patience was expended before it was stated to be "a mistake." If a lady makes "a mistake," she has to pay dearly for it; why should not a seedsman?

I say nothing about the Mummy Corn, Australian Coffee, Japanese Wheat, and Indian Hemp, for these frauds are mostly exposed in the agricultural journals, and he who will not read them deserves to lose ten times the subscription every year. But the seedsman who knowingly sells bad seeds, barters his conscience to the devil for a very small sum, even if the price of his five or ten cent papers is all profit. Can not your self-protecting association include this class of dealers also? Can they not be brought up with a round turn, and made to be honest from fear of exposure if not so? Let seedsmen be notified, that when they put up and vend worthless seeds, they are to be held bound for the loss, and for all the labor and disappointment caused thereby; that for five or ten cents received for trash, they will be expected to pay as many dollars, and they will soon understand what is meant by "a hundredfold."

[We feel deeply mortified in being compelled to acknowledge how much truth there is in complaints like the above. We had indulged the hope at one time that the distribution of worthless seed would be so entirely monopolized by the Patent Office as to leave none in the market for small venders. It was natural to suppose, since the government, at great expense, sent to Europe to buy this class of seed, that the home market had been first exhausted; but this seems not to have been the case, and the government, with all its resources, has been out witted. "Beans" (and he knows) tells us what a thriving business is done in his town, and we know that it is more or less common in a great many others. It was only a few days since that we saw an acre of ground that had been nicely prepared and sown with turnip seed; but there were not two hundred plants on the whole acre. An examination showed that the seed had been worthless. Similar cases are brought to our notice almost daily, till we are at last compelled to admit that the evil is wide-spread indeed. No respectable seedsman, of course, would knowingly sell an impure or worthless article; but the misfortune is, that his name is freely used by country dealers, and he suffers in consequence. It is a common practice with them to buy a little fresh seed in the spring, and mix it with that which has been left over from last year's sales; and in this way some kinds are eked out for several years. Some parties must know that they are thus practicing a grave fraud; others, we believe, are ignorant of the wrong they do; but the evil is none the less, and measures ought to be taken to arrest it. This may be done in several ways, such as sending to our large cities to seedsmen of known respectability, buying of duly authorized agents, exposing and denouncing all cheats, etc. It is hard, however, for a poor man, who only wants a few seeds of a kind, to be compelled to send fifty or a hundred miles for them, at the expense of postage or freight. It is better to do this, however, than to lose the fruits of a year's labor. We should buy no seeds at a country store, unless the proprietor could show undoubted vouchers for their freshness and purity; and we should insist upon full restitution for all errors. In buying

a piece of cloth, we can generally trust to a personal examination; but in buying seeds, we have to rely entirely upon the vender's honesty. We agree with "Beans;" "honesty *is* the best policy." Having said this much on one side, we must add, on the other, that there are persons who do not know—beans, we came near writing ; but we mean, who do not know how to plant seed so as to insure its vegetation even when it is good; all seeds, with them, are planted alike. We should probably help both parties out of some of their troubles by adding some remarks on seed planting, and will do so at another time. If every man and woman only "knew beans," things would work along much more smoothly.—Ed.]

A SHORT RAMBLE.

BY W., WASHINGTON HEIGHTS.

Once, a long time ago, I heard a very pretty song; I believe it was called "Molly Bawn." I recollect two lines at the end of a verse ran thus:

"And the stars above are brightly shining,
Because they have nothing else to do."

Now I do not consider myself a star, although I feel assured there are such things as biped stars. I frequently see them mentioned in theatrical notices and criticisms. Well, like the stars first mentioned, "because I'd nothing else to do"—of importance, mind you; for who ever yet heard of a gardener, if he had a garden to attend to, who had nothing to do? However, feeling at liberty, I thought I would indulge myself in taking a stroll to see my neighbors at Riverdale. I have lived within six miles of them for nearly ten years, and never visited them before. I went up on the Hudson River Railroad; and if you, Mr. Editor, ever land at that dépôt, viz., Riverdale station, just stand for a few minutes on the railroad bridge, and if you do not confess that it is the most charming river view you ever saw on the Hudson—at the same elevation above high water mark—between the ocean and West Point, well, then, you and I disagree, or, in other words, landscape beauty has no seat in your affections, which is a pretty hard thing to say, and still harder to believe.

Riverdale is a clear, substantial, and respectable-looking place. The property on which it is located was purchased after the railroad was finished, by one of the Messrs. Babcock; there are two brothers reside here. He resold to other parties, upon certain conditions, and under certain restrictions, viz.: such as would prevent them from putting up shanties, tenement houses, grog shops, etc. The result is, that not any of these nuisances greet the eye, and the absence of them is agreeably realized as soon as you cross the railroad bridge, and find yourself amid substantial stone houses, with ample lawns, flower gardens, orchards, etc. The un-

pretentious air of respectability and rural quietude which the place assumes is really charming. The first house after crossing the bridge belongs to Mr. Stone, and is surrounded by, and liberally planted with, shrubbery, evergreens, hardy flowering plants, etc., and appears to be kept in very good condition. Further up, and more to the south, is the residence of Mr. Colgate. This place is well located; the grounds very judiciously and tastefully planted and laid out by Mr. Baumann, two years ago. The gardener not being around, I did not ask any questions, but passed on up to Mr. Franklin's, a relative of Mr. Babcock's. I found Mr. Franklin in the garden; an unostentatious and sensible gentleman, with a hoe in his hand. What he was going to do with it, this deponent knoweth not. I suppose he took it with him for the laudable purpose of slaughtering weeds, but where he would find them, I do not know, for assuredly I did not see any.

The first thing that attracted my attention was Rubus laciniatus, at home. I say *at home*, because I have known it for some time, but have never before seen it planted in the proper place. Along the upper part of the vegetable garden Mr. F. has built a stone wall about eight feet high, and I think about 200 feet long. Posts are placed close to the wall, and wires are stretched along them; and about half the length of this wall is completely covered with this *cut-leaved blackberry*, and full of fruit from bottom nearly to top; and luscious fruit too, when perfectly ripe. Mr. F. intends covering the whole of the wall with it. This plant ought to be more extensively cultivated than it is at present. Landscape gardeners will find it a very useful and appropriate plant for various purposes.

The asparagus bug, beetle, fly, slug, caterpillar, or whatever name you please to call the *varmint*, has just made his appearance here, just commenced nibbling the points of the shoots; and I may as well say here, that the first time I became acquainted with this *imp of darkness* was in my own garden, three years ago this summer; and I have manfully fought him ever since, till about three weeks ago, when I cried enough, and "threw up the sponge!" Their Jacksonian style of fighting and bringing up their reserves was too much for me; so I dug all the roots up, and flung them in despair on the rubbish heap.

Mr. Franklin asked me "if I knew how deep Asparagus roots went down." I answered, "They go down two feet, I know; I don't know how much further." "Well," said he, "I had occasion to dig down there six feet deep, and at that depth I found the Asparagus root, thick and strong."

Pardon, Mr. Editor, a slight digression, while I mention an incident which this circumstance has brought to mind. A few weeks ago I went over to Fox Meadow to see friend Ellis. I was accompanied by a grave and portly friend, who responds to the name of Captain. *You* know, Mr. Editor, if your readers do not, that the fine vegetable garden at Fox Meadow was, but a few years ago, a *veritable swamp*. Well, we were walking around, lavishing our panegyrics on the various

crops, till we came to a fine square of Lima beans; and I scarcely knew which looked the darkest, the foliage of the Limas, or the soil in which they grew. The Captain turned to Mr. E., and says he, "Do you ever manure this soil?" "No, sir," was the answer. "Only a little lime occasionally." "How deep does this soil go down?" was the next question. "*Right through!*" says Ellis. The Captain turned around and looked the picture of bewilderment at him! That look (I suppose to Mr. E.) was pregnant with doubts and interrogations, for he proceeded to modify or qualify his seemingly abrupt answer as follows:

"When I first came here it took me about a week to reconnoitre and cogitate about what to do. At last I made up my mind to locate the vegetable garden *here*. About the time, a few feet from where we stand, the farmer came along, and says he, 'Going to make a garden here?' 'Yes,' say I. 'You are, eh?' says he. Well, off he goes and fetches a pole ten feet long, and with one hand shoves it down pretty near out of sight. What little was left above the surface, he slapped his foot on, and put it right out of sight; and then, with the palms of his hands on his hips, he looked me straight in the eye and said, '*You'll make a garden here, will you?*'" Well, Mr. Editor, this is the spot where the Lima beans now grow so rank, and the soil goes *Right through*.

Reasoning from the facts stated above, I think it is highly probable that the soil in which Mr. Franklin's Asparagus grows, goes "*right through*" also.

Mr. F. has a little orchard of the choicest pears, all standards, and he spares no pains or expense in keeping them in good health and condition; and judging from the quality and quantity of fruit I saw on them, I infer they well repay him for the care he gives them. Whale oil soap suds he uses at least once a year, with scrubbing brush, on trunk and branches, with unsparing hand. When Mr. F. purchased the place, he discovered an excellent spring of water; over this he has built a pretty rustic house; the water runs from this into a good sized pond, or small lake; around this, well screened with shrubbery, grape vines, &c., is a cosy, romantic walk. At the lower end of the pond is a *ram*, which forces the water into a large tank in a tower on the top of the house. Last fall, a house, or covering, was built over the place where the ram works; it was arched over with brick; and to keep the frost from injuring it, 6 or 8 inches thickness of coal ashes was spread over the brickwork. This spring Mr. F. observed a bit of the common Periwinkle coming up in the ashes; so he thought he would plant a little more of it to try if it *would* grow in such stuff. Well, the few bits he put in have now grown in a dense mass all over it—about 15 feet square—and looks beautiful.

Mr. F. has grafted several wild and Isabella grape vines (underground) with Delaware, and other new kinds, and they are making a fine, compact growth. Being strictly *utilitarian* in his views and practice, he, Mr. F., has allowed Mrs. Franklin but a small space of ground for her flower garden; it is also on a rock, but having a fountain in the centre, and using such plants as stand the drought pretty well, a tolerable show is kept up all summer.

From here I crossed over to the Kingsbridge and Yonkers road. On my way I passed a house of Mr. Babcock's, where the late Dr. Moffat resided in the summer. In the vegetable garden here, I saw the finest crop of onions and watermelons that I have seen for some years. I think this is about as solitary and secluded a spot as can be found within twenty miles of New York.

There is a kind of bridle path goes through the woods from here to the Yonkers road, and to a lover of native plants, a ramble through these woods is a treat. In the swampy places, the handsome shrub, Cephalanthus occidentalis; the deliciously fragrant Clethra alnifolia; the dazzling Lobelia cardinalis, with its spikes of crimson scarlet flowers a foot long; the chaste and delicate Spiranthes torilis, or *ladies' tresses;* the tiny parasitical twiner, Cuscuta Americana, with its auriferous stems, enclasping the Lactucas, Eupatoriums, etc.; also several species of handsome Ferns. Emerging from these woods, near the road, is Mr. Odell's place. I did not go in, but was somewhat astonished at the very rapid growth the Norways, White and Austrian Pines, and Scotch Firs have made here the past two years. It sometimes surprises me to see the growth these coniferas make in some locations to what they do in others, without any apparent difference, or extra preparation of soil, and the like.

On the right, as you proceed on the road to Yonkers, is a large new brick house. This is Mr. Bruce's. It is a new place, and from the road, at present, looks any thing but inviting. An approach—or rather a road, I will say; an approach is too dignified a term for it—was made by some one, some time ago, and what is called in trigonometry an "obtuse angle" comes nearer to the shape and line of it, than any thing I know; this road, however, is condemned, and another, and far better one is commenced; but as there is a good deal of heavy blasting to be done, the work is at present suspended, in consequence of the family residing there this summer; but as soon as they leave this fall, the work will be commenced again, and finished during the winter.

Mr. Doyle is gardener here, ably seconded by Mr. Crowley, who is also a professional gardener; but being out of a situation at present, he prefers, I presume, "playing second fiddle" here to taking charge of a small, one-handed place, where he would have no scope for his abilities.

The house is built on a rocky ridge running north and south, and the land slopes abruptly to the road on one side, and still more abruptly on the other, or east side of the house. On this side is a deep and sudden declivity, running through a narrow, but thick belt of woods down to the kitchen garden, which is partly made, and cropped, and partly in process of formation.

Down on this *flat* is a range of glass, *lean-to*, about 100 feet long, or more, divided in the centre with a glass partition. The first house was filled full with Fuchsias, Gloxinias, Achimenes, Caladiums, Begonias, etc., all in perfect health and bloom. The other division is planted with grape vines. This is the second year; they are also the perfection of vigor and health. They were cut back last

fall to within about 5 feet of the ground, and from that wood they have, I suppose, from three to nine bunches of well-ripened fruit. This may to some of the *faculty* seem an overtax on young vines, but it does not seem so to me; for the young canes of this summer are right at the top of the long rafters, thick, firm, and short jointed, and the foliage large and healthy, without the least symptom of spider, thrip, or mildew.

On the hill, near the house, Mr. Doyle and his assistant have made a very pretty and effective flower garden. The ground it occupies is about half an acre; the shape, or outline, nearly a parallelogram. I do not think the plan is *original*, as I think I have seen it in Downing, Kemp, or some other work on landscape gardening; any how, it is a very good and appropriate plan for the place, and *well* executed, and, for this climate, remarkably well planted.

It is what we may call a geometrical pattern, on a kind of sunken panel, about six feet below the terrace that surrounds the house. The beds are cut in the grass, and in number, I think, from twenty to thirty.

The centre bed is a large circle, filled with Salvia splendens, with a few early flowering plants to give it color till the Salvias come in bloom. Around this, are four *segments* of circles, filled to match, two with Vinca rosea, and two with its sister, V. alba; not half a dozen plants, but from fifty to seventy-five in each bed.

Then the other figures are filled, some with Lantanas, some with Petunias, others with Verbenas, Phlox Drummondii, and about four small circular beds are filled with Plumbago Larpentæ. At the extreme lower end, where two walks diverge, is a fine large sweeping pear-shaped bed, filled with the choicest Dahlias. I noticed one beautiful white one, which I do not remember to have seen before; it was labelled "Agnes." If you do not possess it, do not forget it, Mr. Editor. Perle de Beaune is a good lilac, also new to me. This flower garden, Mr. D. informed me, is not finished yet. Some Irish Junipers, vases, etc., it is contemplated to introduce; also a Pagoda or summer house at the extreme south end, on a slight elevated rock, to make a finish or back ground. *Finish* reminds me that it is about time for me to finish. If I am not tired, I feel pretty certain, Mr. Editor, that you and your readers must be tired of reading this very elongated and prolix sketch of my SHORT RAMBLE.

[Not in the least tired. We have followed you all through with much interest. We saw the Fox Meadow garden when it was still partly in the condition described, and have heretofore taken occasion to compliment Mr. Ellis for the skillful manner in which he has drained it. We saw Mr. Bruce's place two years ago, and think there must be some mistake about the age of the vines. If our memory does not deceive us, some of the vines were half way up the rafters then. We passed the place again this summer. It is susceptible of being made a very fine one. The "road" is poor enough, and we are glad to hear that Mr.

Doyle has altered it. We hope the spirit for rambling will soon take strong hold of you again.—Ed.]

INTERIOR VIEWS, NO. 5.—EXOTIC GRAPERIES.

BY FOX MEADOW.

We recollect many years ago, Mr. Editor, when our "whole" soul was in *rapport* with that most bewitching goddess, "Flora," how all the faculties of the human mind were assiduously directed to the "tinting up" of color, and the "drawing out" into symmetrical proportions, those little tender delicacies over which that goddess sways her regal sceptre; and how the smile from her beautiful features made the heart leap with joy, when we knew *that* smile was an acquiescence of the perfection, consummated through the care of a fostering hand.

There is not a son of Adam who has ever walked those beautiful paths in "Eden," but has felt the warm blood rush through his veins. Life was there! Spirit and energy were there! Love of God in nature was there! Intrinsic, inherent love of horticulture was there! But the "will-it-pays" *were not there!*

We see the devotee to Flora in his laboratory. Some new beauty has to be developed. We see also a number of ingredients standing separately, and ready for his use. Now watch him, and see how he compounds his materials. He has got an Erica in his hand, a Masonii major; the peat is taken, to which he adds his silvery sand; and how carefully he incorporates these materials together; and after the proportions are carefully mixed, we see him take hold of a handful of this material, and look at it, and then squeeze it; and now he shakes his head, for the mechanical condition of this material is of that nature, that when *pressure* is applied, it *remains* compressed and hardened. This will not do, for water will not pass freely through it, and the consequence of this soil becoming unaerated, would soon destroy the life it was intended to support. The small and tender threads—absorbing fibres, though dependent on moisture as the means to continue life, an excessive gorging with this very element will destroy the whole structure, and life bid us farewell. Watch the remedy! What is it? More sand! Readers, there is not a plant cultivated in a pot by an educated plants-man but what *sand*, and the *quality* of sand to be used, stands of the first importance. There is not a hard or soft-wooded plant grown in a pot, we repeat, on which the very essence of human skill is to be applied, but what *sand* forms one of the principal compounds! We beg the reader's pardon; we have made a gross mistake! There *is* a plant cultivated in a pot, in which compound of soil we have never yet seen an atom of sand ingrediated! Thousands are grown annually in pots, and not one jot of sand put in the soil! How could we have made such a gross misstatement as the above? What species of plant is this which does not require sand in its compound? We will tell you. It is a plant whose roots are *not*

possessed of absorbing spongioles, into which is drawn aqueous matter, but roots possessed with mouths, into which are set "cutters, tearers, and grinders," in order that the solid matter placed for its support can be properly masticated! This species of vegetable phenomenon has a stomach also, into which passes, rotten dung, ground or broken bone, lime, super-phosphates, guano, oyster-shells, beef bones, and dead horses. After these materials have gone through the necessary transformations in this plant stomach, the chemical elements educted may, or may not, have something to do with the constituent elements of this wonderful plant's organism. We will now tell you the name of this most wonderful of all plants: it is "*Vitis vinifera*."

However careful the cultivator may be in compounding his materials, with a proper understanding for the necessity of sand to induce fibrous roots, and of its property for regulating the soil's mechanical condition, the moment he comes to the grape vine, all his previous reasoning seems to be at once ignored, and he treats the vine as he would treat no other plants in pot cultivation; for into the pot is gorged rotten dung, with a host of other things, the tendency of which is to become a solid, greasy mass of constantly decomposing matter. Now if it is of importance to have sand, and a goodly proportion of it, incorporated in our soils for a high state of pot culture, the use of which being to induce fibrous roots, and to keep the compost open and porous; why is it not of the same importance in the pot culture of the vine? And if in the pot culture of the vine, why not in the open border? If a pot containing a few quarts of soil requires its proper proportion of sand to keep this small amount of compost sweet, open, and porous, for a few months' time, is it not of vastly more importance in large masses of earth, where its very weight naturally compresses it in a short time to almost a solid mass? We think this much is self-evident. How can we reconcile the fact to our minds rationally, that a border composed of constantly decomposing, *rotting masses of garbage*, can be the means of producing healthy roots? With all this transformation taking place in the soil through the rotting of the materials placed in it, we get a transformation of the roots, and this transformation is, passing from life to death! There are none of the higher orders of creation in either the animal or vegetable world which feed on *rotting* matter! Such feeding belongs to the swine and stench worms, which are down, down, down! beneath the light of our bright and beautiful noon-day sun! Admitting that the *educt* of such matter in question, forms some of the constituent parts of which the vine and its fruit are composed, there is no reason why decomposition should surround living roots! and the latter be compelled to wait for the necessary element of food being formed by decomposition and *through* transformation? It is true, that the common soil of such borders being absorbent, holds such gases thrown off by the act of decomposition as may in time be of great benefit to the vine; but the means instituted to gain this end is of a more ruinous nature to the vine, and its roots, ten thousand times over, than if the soil was entirely destitute of any stimulating

food whatever. The reader should understand that there is a vast difference between heaping masses of such decomposing materials as are commonly recommended for use in vine borders, and the applications of the same, or similar manures, in lighter doses to the soils of the open ground: for in the latter case the soil is regularly worked, and the direct action of the air is upon it, and through it. But a vine border, which perhaps is four feet deep, and filled up with a mass of decomposing materials, becomes, in the course of two years, a solid mass of greasy, sour matter, in which the living roots of any robust plant would soon die. We have previously explained the reason why vines planted in such material escape death, and this is, if strong, healthy vines are planted at the commencement, the roots run along in straight lines, as directed when planted, and being under the influence of the atmosphere, they travel fast, and consequently are very soon into ground on the outside of the border. In such cases as this, and there are hundreds of them, the roots escape the evil consequences of such decomposing matter. On the other hand, where poor rootless plants have been used, the roots of such will be found in a dying condition down at the bottom of the border, and under the costly mass of greasy acids which has been compounded by the direction of kind ignorance.

In our last article we promised to proportion the materials of which we form vine borders. In the first place, the reader need not trouble himself in looking for his memorandum book, to take down the names of the several compounds which we make use of; but the *quantity* of each used it will be, perhaps, worth while to make a note of. Another thing is, what we are about to divulge, is a *very great and highly important* SECRET, and therefore the reader, if he makes his vine border of our "highly concentrated," and "double distilled," he must take care that upon no conditions whatever does he mention the secret of our materials *to his neighbor*. We are almost afraid, however, to tell, because of the vast expense incurred in the concentration of such valuable and highly important elements of food, "discovered recently" to be of the utmost importance in the "fruit formation" of the plant; we are very much afraid the "will-it-pays" will have very serious scruples about using of it. But if these individuals can be really assured, that these new and important discoveries have led to the combinations of such ingredients in the vast compound of border making, as shall add very materially to the size, color, flavor, and general superiority of fruit altogether, they may perhaps be induced to try our new and very valuable compost. We will vouch our word and honor for the whole and every particle of it, *if* you will only try it. Now then, reader, you shall have it: Sand, Loam, and Muck. The proportions? *one-third sand, one-third sandy loam, and one-third of muck.* Now we hope you will not be frightened at the expense of these materials; and if you wish to see and know what these materials look like combined together previous to using them, just get the proportions together on a table, in a small quantity, and mix them well together; and if you are any judge of the mechanical texture and con-

sistency of soils, you will admit that this compound will never become a body of *humus*, created by the aid of an excess of nitrogenous or carbonaceous matter. In the first place, this border will never become solid. Air and water pass freely through it. It never becomes saturated with water, nor entirely destitute of moisture. It causes the vine to form a host of small fibrous roots in the place of long coarse ones resembling ropes, with their mouths any where but inside the border. The roots are healthy and innumerable; fine and beautiful in their texture. The roots formed during the growing season do not die during the winter, but ripen in the fall of the year, as do the wood of the vines inside the house. The wood produced by vines grown in this compost is remarkably short jointed. and round, with the fruit buds well developed. The fruit itself is more sugary, and the vines scarcely ever seem disposed to mildew. The stems of the leaves are remarkably short, but strong and thick, and the foliage generally of a very dark green, with marked substance of texture. The fruit is solid, and entirely devoid of that aqueous sweetness so often found in grapes grown in borders of a reverse order. The fruit hangs well and long after becoming ripe. The parts of fructification are stronger, and better developed, causing the WHITE MUSCAT OF ALEXANDRIA to set its fruit very well without the aid of fire heat. "Shank," which is a disease that often takes a goodly portion of a crop, we have never known to appear, as a result originating from diseased roots. This disease, however, can be inducted into the systems of the most healthy of vines by over cropping, and consequently "shank" from this cause has no connection whatever with border making.

I have now given the reader the materials of which we compose our vine borders. Some who wish to grow grapes, may not have the "muck" spoken of, and in such case substitute "leaf mould," and if this latter can not be had, get the wanting proportion in the form of moderately fine charcoal; and if no other material can be conveniently got but the sand and loam, use them alone; but do not use equal proportions; put three parts sand and one of loam. There must be sand enough in the border to cause the food and air to pass down through it. This *mechanical* condition of the border, it will be observed, *is its drainage*, and this drainage is the means by which the food of the vine is carried down through every particle of compost to the absorbing small fibrous roots.

(TO BE CONTINUED.)

ROGERS'S HYBRID, NO. 15.

BY THE EDITOR.

WE have already figured this new grape in a previous number, with a description of it by a Boston friend. We have lately received some fine clusters of No.

15 from Mr. Rogers, taken from young vines; two of them are much larger than the illustration. Mr. Rogers says in his letter: "These were grown in the garden of Mr. Wm. Harrington, of this city, (Salem,) who resides about half a mile from me. His vine has been out four summers, and last year produced a large crop, he having permitted it to bear all the fruit it then showed, which many thought would injure the vine so that it would produce no fruit another season; but this year it came out fuller than ever, but was not permitted to bear but one bunch to each shoot; about two hundred and fifty were thinned out, leaving to ripen about one hundred and fifty bunches. There were several as large and heavier than the largest now sent, and none have been grown by girdling, which I consider spoils the quality of the fruit, though adding greatly to the size. * * * Mr. Harrington planted his vine (a small one in pot) about three years and a half ago in the common soil of his garden, without any prepared border, and not in the best position, being on a close board fence, facing nearly east, very little to the south, and having a Concord vine in front, which shades it somewhat; but the No. 15 is a week or ten days earlier, and nearly twice the size of this Concord in a better position, and more eatable than Hartford in the same garden from the earliest period of ripening."

We have watched the progress of these Hybrids with much interest, as marking, in connection with Mr. Allen's hybrids, a new era in grape culture. The question, as to whether the native will cross with the foreign grape, may now be considered as settled. It ought never to have been mooted. All of the Rogers's Hybrids that we have are good growers, Nos. 19, 3, and 15 being the strongest. Tiny little vines put out last spring have made from 8 to 22 feet of good wood, under fair treatment. In regard to the fruit of No. 15, we find the bunch to be large and handsome, the color, however, a little dull. The berry is also large, and, with a few exceptions, quite round. The skin is thick, and only a little tough. The flesh is soft and tender, but not melting, with some toughness at the center; it is also sugary, a little juicy, and somewhat buttery, like the Concord, but with less of the native flavor. It is also less musky than the Concord; and this will grow still less with age and culture. The flavor is pleasant, but not vinous or spicy. The after taste is not so rough as the Concord, Isabella, or Hartford Prolific. It is a good grape, with distinct characteristics, and, if sufficiently early and hardy, (which seem to be pretty well established,) will prove of value as a market fruit. We hope Mr. Rogers will continue his experiments in hybridizing till he gets a grape of the size of No. 15 with the vinous spirit and purity of the Delaware. We append a pomological description:

No. 15.—*Bunch*, large, moderately compact, shouldered. *Berry*, large, round, a few slightly oval. *Color*, dark claret, with a thin bloom. *Skin*, thick, somewhat tough, with some native aroma. *Flesh*, soft, sugary, moderately juicy, somewhat buttery, with some toughness at the center. *Flavor*, pleasant, but not vinous. *Quality*, very good.

REJUVENATING OLD HOUSES.—NO. IV.

BY MYRON B. BENTON.

I WISH to offer a few words upon the immediate surroundings of this class of old farm-houses. Let it be borne in mind, that these remarks are not intended to refer to the laying out of new places—though, of course, they are in a measure applicable to all—but wholly to a residence which has been long established, and one where numerous defects have accumulated in the course of years. A few of these can be abolished, some partially remedied, but some must remain.

It is impossible to make a picture which will embody the features of all; but there is so much uniformity in many respects among this class of buildings, that one may be pictured which will give the principle characteristics of the largest share of them. The house, with a front door into a hall between two rooms, stands within a very short distance from the highway. The barns, if not standing in front across the way, are upon one side at a little distance; and the vegetable garden is close upon the other side. There is thus a small narrow strip of yard against one or two sides of the house, adjoining the principal rooms. And what a scene does this little yard present! O, you earnest, denouncing, pathetic pleader for the setting out of trees; you who write several stirring articles in every number of the various agricultural and horticultural journals, which periodically reach the table of that tender-minded farmer! His naturally sensitive conscience has become diseased and morbid; so has your preaching upon this subject wrought upon him. So constantly has he been dealt with, in season and out of season, to set out trees, that he has come to fear that he will be thought a savage and an outlaw, worthy of no consideration from his fellow-men; and he thus devotes considerable time annually to the placing of trees around his house. Where are they set out? Not in the garden, for good reasons. Vegetables would not grow in such a shade; but the farmer has failed to learn that human beings will not be healthy under the circumstances. The out-buildings occupy the ground on every other side; so all the trees are transplanted into that narrow strip of yard. How long would it take to fill that little space with all the trees that it should hold? And yet this man yearly devotes a season to the work there! The result is far from gratifying. The trees are so crowded and jammed together, that all sunshine, to say nothing of a reasonable share of reflected light, is excluded from the interior of the house. The yard is a damp, mouldy, unwholesome, unsightly place. There is no turf, for it is impossible for grass to grow in such a place.

In ninety-nine cases out of a hundred, in the country, the advice should be to use the axe instead of the spade, to improve a place. Cut down nine-tenths of the tree and shrub growths, and admit the sunshine to the house through broad openings. Let the turf—the sweet and green grass, thick and fresh, sweep clean up

to the foundation stones. A little shrubbery should be admitted, and a few vines to clamber over the house; but nothing in sufficient quantity to prevent a clean, wholesome growth.

In improving a place like this, the principal thing to be obtained is room—more room. Around almost any old farm-house, this is sadly wanting. Where every thing has been so long established, it is difficult to break through the old fixtures. The ground occupied by the vegetable garden seems generally the only available space. Too prominent a place is commonly given to this department. It is not that it should be hid because it is useful instead of ornamental. On the contrary, many of the most useful objects around a farm-house are an added attraction if in plain sight. They give character to a place. Barns, hay-stacks, wagon-houses, etc., should not be placed as if there was any attempt at concealment. They should not come into the view, however, obviously; not as if cattle and sheep were of more importance than the farmer and his family, but still such objects should be in sight as representing his honorable vocation. Good taste—one that has been cultivated—will decide as to the exact degree of prominence to be given to the out-buildings of a farm establishment; and while sufficiently removed to make them subordinate in character, they will be near enough for convenience.

With regard to the vegetable garden, I think its usual position too prominent, having the most conspicuous place on the premises. It is generally close to the street and the house. Its appearance is pleasant, and even pretty, early in the spring, when the beds are newly laid out; but through the middle and latter part of the season, it is positively unsightly, so close by. It looks seedy; the cabbage, beets, onions, beans, etc., lose all their juvenile freshness, and become forlorn and wretched; to say nothing of the weeds that will grow so fast during haying, and other busy seasons when they can not be well looked after.

In fact, the kitchen garden should be banished to more retired quarters; and I would further suggest, to a place where more of the work it requires can be done by horse power, and spare a portion of the human power wanted in so many other ways. It is a great labor to cultivate a quarter of an acre wholly by hand, and in a country where this is so costly an item, every means should be taken to lessen it.

[It is quite manifest that Mr. Benton has been about in the country with his eyes open. It is quite true that there are many, very many, just such places as he describes, and we hope these articles will fall into the hands of some of the owners. There are others, again, where the admonition to plant trees will apply with full force. We like shade, and breadth, and massiveness in their proper place; but we abominate all systems of planting which result in shutting out from the mansion the blessed light of heaven. They are demoralizing and misanthropical. Let sunlight into the house, and you let joy and gladness into the heart.

Make your shady corners and cosy little nooks, but let the sunlight play around them.—Ed.]

THE PRACTICAL PAPERS. NO. VIII.

BY OLAPOD QUILL.

Dialogue. John and the Old Gentleman; or, the "old way" not always the best.

Some farmers, even in these days of improvement and widely disseminated agricultural knowledge, are quite willing to abandon their practice, to their own preconceived tastes and prejudices, not having the patience requisite to make a serious investigation into the natural laws that govern their business. Such men never examine, or but rarely look into those great scientific principles which, if practically applied, would cause two blades of grass to grow where but one did before. As to the use of guano, and the many new and valuable fertilizing agents, they never think of using them. "Nonsense," says such a one; "book farming; all fudge; give me the old way; that is good enough for me. My father always farmed in such manner, and I am not wiser than my father."

We once heard one of these farmers, who was wise in his own conceit, ask his son: "John, what has eaten all the leaves off the Gooseberry bushes in the garden?" "The caterpillars, sir." "The caterpillars! kill them, then." "Yes, sir." The old gentleman went out into the field to his work; John took the old chaise, and drove off to town for a box of whale oil soap. He shortly returned with his antidote, and after mixing it with water in proper proportion, set about its application with a skillful hand. While he was thus engaged with a good sized garden syringe, administering in wholesome quantity this fertilizing, worm-destroying fluid, the old gentleman entered the garden. His first words were, after looking at John with perfect astonishment for a moment or two: "What are you doing thar, with that are tarnal old squirt gun?" "Killing the worms, father." "Killing the worms! Put that thing up, and get away with your book farming." "But, father," replied John, "the worms and caterpillars will eat—" "Let 'em eat; but I won't have any book farming on my premises, eat or no eat." The old gentleman went to his dinner, and thought no more about the Gooseberry bushes, the caterpillars, or the squirt gun, and John, for several days, reigned lord of the garden, and daily showered his favorite gooseberry bushes with the new fertilizer of which he had read, and which he had seen his neighbor use with good success.

One Monday, a few days after, the farmer thought he would take a look at the garden and the gooseberry bushes. On entering the garden he found John hard at work with the "old squirt gun," and beholding at a glance the good effect of John's scientific application, he was at once convinced that there was "something in the thing, after all." So much interested was he in the *new fertilizer*, so delighted with the beautiful greenness of the gooseberry bushes, that he could scarcely

contain himself. Seizing at once the syringe from John's hand, he commenced a vigorous application of the fluid to the bushes. John looked at him for a moment with a peculiar expression of countenance, and then quietly remarked, "Father, that is the old squirt gun; what do you think of it?" "*Think of it?*" said he. "I'm an old fool, that's all. Squirt away as much as you like. Go and buy you the best garden syringe you can get, and use it. You and I must look into this book farming a little more. I am sure there is something in it."

Thus by the observation of a single fact, one of the most strenuous opposers of "book farming," or theoretical knowledge, became convinced that in these latter days, there was a possibility of a man's being even wiser than his father.

Still we find many men content to plod along the same old road their fathers trod, manfully buffeting, I admit, all the toils of the journey, without the will to make a single experiment, whereby they might improve the old beaten track or make it better. Such may, and do, by a persevering, laborious industry, succeed in raising a crop, of gaining a livelihood; but they will never know from experience the true dignity and independence arising from a thorough scientific knowledge of their calling.

GRAPE WINE FOR THE MILLION.

BY AN AMOR–ITE.

The Grape crop on the Hudson, like all other fruit crops, has this year been very abundant. Many of your friends will probably be pleased to have a simple and reliable recipe for making wine. My experience is at their service; and if any of your intelligent readers succeed as well as I have in making a really good wine, I suggest that they send a bottle to the Editor the day before he invites me to dinner. I shall endeavor to make my recipe short and comprehensive.

1st. All the manipulations should be conducted with scrupulous cleanliness. All the vessels should be procured beforehand, to contain the fruit, broken grapes, and juice.

2d. Gather the grapes in a clear dry day, and at once have them picked over, removing all green berries, and all that are soiled, wormy, or decayed.

3d. None but fully ripe grapes should be used to make choice A No. 1 wine.

4th. Break the grapes in a tub with a pounder until all are mashed. I use a clean Welsh butter tub about two feet deep, flaring at the top. Cleanse it with wood ashes and water if it has been previously used, to remove all grease; soak it well with hot water and scour it with sand; turn it upside down, and fit a piece of board to the bottom even with the chime, to prevent knocking the bottom out.

5th. When the grapes are all mashed, put about four or six quarts into a strong

light bag; thin hempen coffee bagging is best; tie loosely, and press out all the juice by means of a screw or lever press; do not press a second time for the best wine.

6th. The juice obtained will be thick; it must not be strained; the mucilage contained therein is quite necessary to the fermentation, and it will in due time "find its level" at the bottom of the cask. Do not put the skins of the grapes into the fermenting cask.

7th. The fermenting cask must be clean and pure. It should be nearly full, and fitted with a tube bung, a tube made by a tinner, in the shape of this—⌐. It will cost six cents. Let the longest arm pass through the bung, and the shorter one enter a cup of water, so that the carbonic acid gas may escape without admitting atmospheric air.

8th. The fermenting cask should be kept in a warm room, and the fermentation should go on until the bubbles cease to rise in the cup of water. Draw off the wine as soon as it is clear, into a clean cask, and place in a dry cellar; a vent hole with a spile in it, will enable the vintner to allow the escape of gas, and should be looked to frequently, being careful to stop the vent immediately.

9th. Draw off the wine, during the month of March, from the lees into a clean cask, and let it stand until the following October, when it may be bottled. Use the best velvet cork, first wetting them with wine, and make them go tight, driving with a wooden mallet while the bottle is standing on a smooth hard surface. If held up in one hand and driven with the other, the bottle is liable to break; so also will it break if the bottle is too full.

10th. Treat your friends, don't forget the editor, and drink a little for the stomach's sake. A reason why you should not drink it all at once is, that it will improve by age.

I have said nothing about sugar, which with some persons is inadmissible, but if one has neither Delaware, Diana, nor Hyde's Eliza grapes to make wine of, and nobody has these in sufficient quantities yet, he must use the kinds in cultivation, Catawba, Clinton, Isabella, &c.; these require an addition of grape sugar to produce enough alcohol to make them keep. Under no circumstance must apple brandy or other liquor be used for that purpose, as the aroma of the wine is thus destroyed. Then the deficiency must be made up with the very best refined loaf sugar, to be added to the grape juice and fermented with it; this is first converted into grape sugar, and then into alcohol. The quantity of sugar to be added depends upon the ripeness of the grapes. Good ripe grapes contain ten and some twelve per cent. of sugar. One pound or a pound and a half of sugar to the gallon will add enough to equal fifteen per cent., quite sufficient to produce within a fraction of seven and a half per cent. of alcohol, the amount required to prevent acetous fermentation. Wine with this quantity is far better than if stronger; it will "cheer but not inebriate;" neither the chemist nor the thin-skinned Tartar can detect it. It is a mistaken notion to suppose that sugar is added to the must to sweeten the

wine; if well fermented, it simply adds strength. Sweetened wine becomes sirup, and is no longer wine. The usual practice is to sweeten after fermentation; hence the sugary taste. For uneducated palates, it may be sweetened when ready to drink, as the sailor makes his switchel, half molasses and half rum, and may be thus rendered *nearly* as palatable. No water must be added to the grape juice except for the purpose of producing a light drink, which will not keep, and must in no case be added to the real wine. Water is an adulteration of wine, though a learned judge has decided that it is not of milk! Those who think water an improvement to wine, had better try the experiment on a small scale,.and see the folly of it for themselves. A bottle of good wine will cost four to six cents more than the poorest. Really good wine can not be made of poor materials, such as unripe fruit and brown sugar, but I will give the recipe to make the best wine possible of unripe grapes:

1st. Let the manipulations be as before described.

2d. Select the ripest grapes you have.

3d. Add three pounds of the best sugar to each gallon of juice, and be sure that it ferment until all sweetness disappears. Add no spirits.

4th. With a lively imagination, equal to that of the Marchioness in Dickens' Old Curiosity Shop, putting it "very strong," one may suppose he has good wine.

The recipe for poor wine is to use poor materials. Success will follow even with cleanliness.

Good vinegar may be made from sour grapes, and grape skins, by adding two gallons of water and one pint of molasses to each gallon of juice, and keeping it moderately warm.

If not out of place here, allow me to say a word on the grape crop of this region. Those who have read and followed your Hints have ripe fruit to send to market, and are getting eight and nine cents for Isabellas, while the quotations are two to five cents; they also have ripe cane for the next year's crop, while the larger number of grape growers have neither ripe fruit nor ripe wood. While shipping fruit to New York on one of our barges, I was delayed by two men who were bringing packages of grapes ashore. As this had quite the appearance of a water-running-up-hill process, I inquired what was the matter, and was informed that these grapes had made two voyages to New York, and were returned, marked "no sale," an offer of one cent a pound being the maximum. The owner kindly permitted me to look into one basket. It contained small bunches of unripe grapes. I suggested that he had picked them too soon. Oh no, said he. I did not pay much attention to my vines this year. I neglected to prune them until it was too late, and then I got so busy with my spring work that I did not plow among them, and neglected to tie them up. I think the vines bore too heavily. My fruit did not ripen well nor the wood either. The fact is, the grape business is a failure, I don't believe I shall have ten pounds of grapes next year. Last season I asked this man to take the HORTICULTURIST, but he said, as it

was war times, he would try and save the expense. My opinion is, that he has *saved* it over the left shoulder. Perhaps my receipt for making vinegar will be of service to him, and I give you his address, hoping you will send him a copy.

[We must inform our readers that no good wine can be made after this receipt without a strict observance of the 10th rule, especially the second clause. We shall send the HORTICULTURIST to your misguided friend. Our subscribers do not sell their grapes for a cent a pound, and have them returned even at that. We can not be expected to feel much sympathy for men who risk their crops for the sake of saving a couple of dollars, though we think such things are much to be regretted.—ED.]

THE ADIRONDAC GRAPE.

BY THE EDITOR.

IN our number for March last we gave a drawing of this new grape, with a description by a correspondent. We lately received a sample from Mr. Bailey, of Plattsburgh, N. Y. Our frontispiece in the March number is a very good representation of the size and form of both bunch and berry. In general appearance it resembles the Isabella, but the bunch is more pointed, and the berries not quite so oval. The skin is thin. The flesh is juicy and crisp rather than melting, with a little hardness in the center. It is quite sweet, with a flavor that reminds one of the Black Hamburgh; yet it is not high or very decided. This Hamburgh flavor has caused some to doubt whether it is a native; but we have the vine growing, and its native character is unmistakable. It is said to ripen two or three weeks before the Northern Muscadine and Delaware, which would place its season, in many localities, early in the month of August. If this should prove to be so, its earliness and good quality will give it much value for northern latitudes. Another year may add something more to our knowledge on this point. It is not always safe, however, to predicate the earliness of a grape upon the locality where it originated, for local causes are sometimes concerned in its maturity which do not operate generally. We hope the Adirondac, however, may prove to be quite as early as it is thought to be, for it will give us a starting point for something else, independently of this. We believe the Fruit Committee of the American Pomological Society reported it as "promising well."

THE PRAIRIES AGAIN.

BY CHARLES S. KENDERDINE, RICHMOND, IND.

I NOTICED a communication on Western Prairies in your valuable work, from the pen of an able writer, "Why are they not Forests?"

I wish to differ from him a little; also from the popular opinion of the day, or, at least, other reasons worthy of note can be submitted in addition to his, that have some bearing on the cause. In the first place, I have resided on the beautiful Western prairie of Iowa for the last seven years; and as my mind has often been deeply impressed with the sublimity and beauty of the works of nature in this particular, and being placed in a position by my fellow-citizens, where it becomes my duty to inform myself in agricultural pursuits, both in the examination of the soil and its products.

I have noted the soil of different prairies—their locations, their different qualities; and have noted particularly the great depth of soil, caused, no doubt, by some great freak of nature, as the soil of the timber land, in many instances adjoining was not one half the depth, and of a heavy clay soil, while the prairie was of a loose black loam, often quite sandy, even small pebbles, that could not have been produced by fire. It is said, a cause has its effect. We find some parts of our Western prairies have been settled for the last twenty years; and interspersed with these settlements we find thousands of acres of land in the hands of speculators uncultivated, and where the prairie fires are not permitted to spread; still, we find neither sprout nor shoot of any kind, except on a kind of brush land that is distinct from the clean prairie, which often extends as far as the eye can reach, the grass partially kept down by herds of cattle from adjoining settlements.

There is no doubt but that seeds of different kinds often drop on these prairies by birds or strong winds from the timber, but by some cause they do not take root. It seems the soil is not adapted to the growth of timber until cultivated. We find the prairie in this State to be high rolling land; the timber land to be that portion skirting the rivers or streams, generally of a thin shallow soil, except the bottom land between the bluff and the stream, and in many instances this portion to be void of timber, particularly that part that is of a deep and unnatural soil. Now this is evident to my mind, that the majority of the prairie land has been prairie from the time of a great flood, or from some convulsions of nature, and has remained so ever since, the decree of an all-wise Providence for the benefit of poor frail man, although such has not been the ultimate result; for, in consequence of the ease in bringing forth the products of this loose loam, and the abundance of the crops, it has naturally produced indolence in our agriculturists, after producing a crop of corn on these prairies, say twenty years on a piece of

land successively, which can be done, and still the soil retains its color, and its richness to some extent, and is much preferred for, and considered better adapted for fruit trees, or for planting groves on. It is evident that the prairie soil is largely impregnated with magnesia and lime; so much so in some locations, that lime is no benefit as a stimulant. I have often reflected in my mind, the number of times it would require the fires to run over these prairies to create a soil from one to two feet deeper than the adjoining soil of the timber, as we often find it; and we often find the soil varying; sometimes the sand on top, sometimes the the loam, on a rich clay of a dark color, being evident it came there promiscuously.

These are my observations. Use them, or a part, as you think proper.

[We had no idea, when we published the first article on the Prairies, that it would lead to such interesting developments. We have now had three interesting and valuable articles on the subject, all of them from parties who have spent much time on the prairies, and one of whom has examined them as a man of science. All three in the main agree, but differ not a little from most travellers and novelists. In solving the question, "Why are the Prairies not Forests?" there will naturally be a difference of opinion, since the cause is not apparent. Indian tradition would lead us to believe that the prairies were burned over many hundreds of years before the white man took possession of this continent. This fact, with its results, will form a very interesting subject of investigation for our correspondents, who, we hope, will send us still more material for history.—Ed.]

EDITOR'S TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to THE HORTICULTURIST."

A WORD FOR OURSELVES.—As we approach the close of the Seventeenth Volume of the HORTICULTURIST, it appears proper to say some thing respecting our plans for the coming year, January, 1863, being the initial number of the Eighteenth Volume. We believe that all our promises made for the Seventeenth Volume have been more than fulfilled. The high standard always occupied by the HORTICULTURIST has been steadily maintained, and the substantial opinion of the public awards us success. The result of this war year now closing has, in a business point of view, been very satisfactory to us; only a small proportion of our subscriptions have ceased, and the ranks thus decimated have been largely increased by new recruits. Our advertising patronage has been fully up to that of the most prosperous year, and promptly paid for; the only changes, therefore, that we shall make for the future will be to increase the value and excellence of all its departments.

We contemplate illustrating our pages to an increased extent, and to give additional attention to Rural Architecture; a feature which characterized the earlier volumes, and which is universally desired. The subject of Grape Culture, both in open air and under glass, will be fully treated. We shall furnish the grape grower such information as he can obtain from no other source. On all matters relating to the progress of Horticulture, and other subjects coming within our sphere, we shall give the best practical instruction.

We hope not only to retain our present handsome list of subscribers, but that each one will interest himself in obtaining others. Our Club terms are so favorable that none who have any interest in Horticulture and its kindred pursuits, can afford to be without this magazine.

Now is the time to form clubs and send in subscriptions for the New Year. Those new subscribers who are prompt will receive in addition the numbers of this year that are published after the receipt of their remittance.

The volumes for 1860,'61, and '62 are offered at premium rates. They commence with the editorship of Mr. P. B. Mead, and contain all the connected series of

articles on Grape Culture, Landscape Adornment, and other subjects. The supply is limited, and they are not stereotyped.

In conclusion, we will say that not only will the high character and fine typographical appearance be preserved, but all progressive improvements will be taken advantage of. We have the capital, the ability, and the intention to keep the HORTICULTURIST in a leading position, and through war or peace, through adverse and prosperous times, we shall sustain its uniform excellence.

Our terms for 1863 will be

One copy, one year, invariably in advance, -	$2.
Four copies, " " " -	6.
Clubs of seven and one annually to agent, -	10.
Bound volumes, 1860, '61, and '62, and subscription 1863,	7.

Address all subscriptions invariably to

MEAD & WOODWARD, Publishers,
37 Park Row, New York.

THE DELAWARE GRAPE.—Our readers are perfectly familiar with the position we have taken in regard to the Delaware grape. We have repeatedly stated that very few persons had any proper conception of what it would be when the vines had attained age under generous treatment. Some of our friends thought we had overestimated it; but bunches and berries fully equaling in size our statement are becoming more or less common, while some surpass it. Our own knowledge made us confident that our position would be completely vindicated, and we determined this fall to give our readers some evidence of it. With this view we selected a bunch from the vineyard of B. H. Mace, Esq., of Newburgh, and placed it in the hands of C. W. Tice, Esq., of Newburgh, who, as a painter of fruit, is not excelled by any artist in the country, and equaled by very few. Mr. Tice has given us a life-like portrait of the Delaware. As an exact portrait, as well as a work of art, it is the best grape portrait that we have ever seen; nothing of Hall's that has ever come under our notice equals it, and that is the highest praise we can bestow upon it. The bunch selected measures nearly seven inches in length, and four and a half in width, with berries like the Diana. It was not the largest we have seen during this season, either at Mr. Mace's or elsewhere. This fine portrait we propose to have executed for our readers in the highest style of art, cost what it may. We shall publish it in the April number, beautifully colored, and furnish it to all our subscribers. We mean to make it the best thing of its kind yet issued. We also propose to publish in the fall a colored plate of one of the best Strawberries or Pears. To non-subscribers, or those who do not take the magazine regularly, the price of the colored numbers will be 50 cents each. In addition to all this, our monthly frontispieces will be continued, and our usual handsome typographical appearance strictly maintained.

Our present subscribers are requested to renew their subscriptions as promptly

as possible, and to use their influence among their friends to induce them to subscribe likewise. This will enable us to adjust our edition, and lay out our future plans to the best advantage. We shall appreciate all such attentions.

FRUIT FOR OUR WOUNDED AND SICK SOLDIERS.—The heroes of our armies especially the wounded and sick, have claims upon us all which we must not neglect. An appeal comes to us from the sick and wounded for dried and preserved fruits, especially dried apples. Hundreds of our readers have more than enough and to spare. With a harvest of fruit that has scarcely ever been equaled, it would be a shame to us all that our sick soldiers should want for it as a comfort, or even a luxury. Let societies be formed, and social gatherings held, therefore, all over the country, for the preparation of fruit for our sick and wounded soldiers. Think what blessings will ascend to Heaven for you. A few days since we saw a wounded soldier drop one of his crutches, and crossed over to him and picked it up. We could not hear his words of thanks, but we can not, and do not wish to forget the look he gave us. We shall cherish it proudly as long as we live. Do not let it be said that horticulturists contributed nothing of their stores to mitigate the sufferings of the sick and dying. We gladly make room for the following circular of the Sanitary Commission:

CENTRAL OFFICE, SANITARY COMMISSION,
Washington, October 2d, 1862.

The inquiry being frequently made whether the Commission wishes to receive apples for the use of the wounded, it should immediately be published, as widely as possible, that dried apples can not be sent to its depôts in too large quantities. Town and Village Relief Societies are requested to make arrangements for paring, cutting, and drying by their members, and such volunteer assistance as they can enlist, and to notify farmers that they will receive such good fruit as they may be disposed to offer and are unable themselves to properly prepare. Dried apples may be sent in barrels or boxes, or in strong bags marked "To be kept dry." Dried fruits of other kinds, and all good canned fruits, will be very acceptable.

FRED. LAW OLMSTED, General Secretary.

DEATH OF MR. WILLIAM REID.—We are deeply pained to announce the death of Mr. Willian Reid, of Elizabeth, N. J. The event was sudden and unexpected to all. Attacked with disease of the heart a few days after his return from attending the meeting of the Pomological Society, he lingered a brief time, and then passed, as we hope and believe, to a better world. Mr. Reid occupied an enviable position in his profession. He was noted for his integrity and uprightness in business, and was highly esteemed in the social relations of life. His nursery has often and justly been called a model, presenting, indeed, the appearance of a highly kept pleasure ground. Some extended notice of Mr. Reid's life we hope to present hereafter. The nursery business, we understand, will be con-

tinued by the family, who, we hope, will strive to maintain its high and well-deserved reputation.

Figs.—We are indebted to Thomas Ingham, Esq., of Fort Washington, N. Y., for a basket of very fine figs, being the second crop of the season, which consisted of some 500 figs. The tree is bent down and covered with earth during the winter, and produces two good crops annually. Mr. Ingham gave us some interesting particulars in relation to his mode of cultivating the fig, which we shall soon lay before our readers.

Horticultural Societies.—The exhibition of the *Brooklyn Society* is conceded to have been the best it has held. That of the *Newburgh Bay Society* was also its best, and was well patronized by the public. The *Poughkeepsie Society* also had a good exhibition, which the people there did not seem so well to understand. Our accounts of these and others we are compelled to pass to our next issue, much to our regret.

Evening Party Apple, by Chas. Downing, Newburgh. (*See Frontispiece.*)—Tree, vigorous and productive; fruit and foliage hang well and late on the tree. Origin, Bethel Township, Berks Co., Pennsylvania.

Fruit small to medium; oblate, a little inclining to conic, slightly angular; sides sometimes unequal, sometimes slightly oblique. Skin, pale yellowish green, somewhat waxen or oily, shaded, splashed, and striped with light and deep crimson over two-thirds its surface; in exposed specimens quite covered with dark red, and pretty thickly sprinkled with light dots, especially around the calyx, a portion of the larger dots having a brown centre. Stalk short and small, set in a rather large and deep cavity. Calyx closed, or partially open; sequents a little recurved; basin rather large and smooth. Flesh, whitish, tender, juicy, with a mild, peculiar, pleasant, saccharine, somewhat vinous flavor. "Very good." Core rather small. Ripe, December to February.

Russell's Seedling Strawberry.—We are indebted to Mr. Clapp, of Auburn, N. Y., for plants of this new Strawberry, which we hope to give a good account of next season.

To Advertisers.—We again call the attention of those who wish to reach the very best class of country custom, to our advertising columns, as a valuable medium for bringing into notice all that appertains to the necessities and luxuries of country life.

The magazine is found upon the Library Tables in nearly all our country seats, in the office of nearly every member of the Nursery Trade, and in the reading rooms of the principal Horticultural Societies and public libraries throughout the country. This is well understood by most of the prominent dealers who have tested its value, and we recommend it to all who wish to increase their business facilities.

WANTED.—Two volumes of the HORTICULTURIST for 1853, for which we will pay $3 each in cash on delivery at this office. Subscriptions for 1863 exchanged for volumes for 1858.

BOOKS, CATALOGUES, ETC., RECEIVED.

Frost & Co., Genesee Valley Nurseries, Rochester, N. Y.—Wholesale Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, Bulbs, etc., for autumn of 1862.

B. K. Bliss, Springfield, Mass.—Autumn Catalogue and Floral Guide, containing a choice collection of Dutch and Cape Flowering Bulbs—Hyacinths, Tulips, Narcissus, Crocus, Firs, Lilies, etc., with full and explicit directions for culture.

Isaac Pullen, near Hightstown, Mercer Co., N. J.—Catalogue for the Fall of 1862 and Spring of 1863, of Fruit and Ornamental Trees, Vines, etc.

Andrew Bridgeman, 878 Broadway, New York.—Descriptive Catalogue No. 7, Bulbous and Tuberous Roots, with Directions for their Culture and Management.

J. F. Deliot & Co., at D. C. Ryder's Nurseries, Sing Sing, N. Y.—Price List of choice Grape Vines, for 1862–3.

J. Knox, Pittsburgh, Pa.—Price List of Small Fruits, etc., for the Fall of 1862.

Hoopes & Brother, West Chester, Pa.—Wholesale Catalogue of the Ohung Hill Nurseries, for Autumn of 1862 and Spring of 1863.

Godey's Lady's Book. L. A. Godey, Philadelphia, $3 per annum. With liberal reduction to Clubs.—This old and well managed Magazine keeps on its steady course. No novelty escapes its enterprising publisher, and no pains are spared to make it first rate. One may as well be out of the fashion as without Godey.

John Saul, Washington, D. C.—Wholesale catalogue of Fruit, Evergreen, and Ornamental Trees, Shrubs, Roses, &c., for the Autumn of 1862 and Spring of 1863.

Geo. W. Campbell, Delaware, Ohio.—Descriptive List of Hardy Native Grape Vines.—Mr. Campbell has some very spicy correspondence at the end of his Catalogue.

The Country Gentleman. Luther Tucker and Son, Albany, N. Y.—The only weekly paper devoted mainly to Agricultural matters. It is of permanent value and interest, and reliable authority on all subjects of which it treats. Its corps of contributors is large, and comprises the best talent in the country, thus giving life and novelty in its treatment. It ought to be in every farm house in the country, and if so its effects could not be otherwise than a national gain. There is no one who cultivates the soil so poor that he can afford to be without it.—Quarto, 16 pages, $2 per year.

Correspondence.

EDITORS HORTICULTURIST:—The model report of J. T. T. in last month's issue is the example for the following, except that I give my *locality*, which J. T. T. ought to have done. My vines are growing in the garden, and receive *fair* treatment; soil limestone.

Anna,	Badly mildewed.
Brincklè,	No mildew.
Concord,	" "
Clara,	" "
Cassidy,	Slightly mildewed.
Catawba,	Mildewed and rotted badly.
Delaware,	No mildew.
Diana,	" "
Garrigues,	Slightly mildewed.
Isabella,	Badly mildewed.
Louise,	Slightly mildewed.
Northern Muscadine,	No mildew.
Hartford Prolific,	" "
Rebecca,	Slightly mildewed.
Segar Box,	Badly "
Secord's White,	No mildew.
Taylor,	Slightly mildewed, but dropped its fruit before maturity.

I have a number of vines in a fruit garden in the country; among them a large Isabella and Catawba that I laid down last fall and covered with several inches of soil, which did not mildew or rot. Can you account for this? The exposure of these is easterly, whereas my vines in town have a southern exposure, nearly all of them, but none were laid down.

Now for a brace of questions. What is the proper season to sow grass seed to produce a good sod, and what shall I sow? Would an application of gas lime be beneficial to fruit trees and grape vines? In what quantities should it be applied? On the surface, or forked in? the lime having been exposed for several months. Would an application of gas lime benefit a vegetable garden, if the soil were loosely thrown up this fall, and the lime then spread on it, to be worked in, in the spring?

Yours, J. W. M.

Lebanon, Penn., October 6, 1862.

[We are delighted to have another model report. A vast amount of the most useful information can in this way be comprised within a very brief compass.

We shall be much gratified to have these models greatly multiplied. Our readers need have no fears of sending too many of them. J. T. T. did give his locality, but our printer unfortunately omitted it, and to that extent lessened the value of the report. His locality is Harlem, on the northern end of New York Island. Your report agrees substantially with what we have observed in many parts of New York and New Jersey. Every where the Catawba heads the list of "mildew and rot." The covering of your vines in the country will not sufficiently account for the absence of mildew and rot. The exposure and protection from cold winds would go far to explain it. We should be glad to hear more of the conditions under which these vines were grown. We presume your question about sod relates to the formation of a lawn. In our experience, we have found the early spring to be the best time for sowing the seed, the preparation of the ground having been mainly done in the preceding fall. We seldom sow any thing but Kentucky Blue Grass and White Clover; sometimes we add a little Red Top. If grass seed is sown in the fall, it should be done early, so as to give it a good start. If snow should be plenty, the young grass will go through the winter tolerably well, and make a fair sod. It is well, however, in this case, to sow more seed at the end of winter, while the ground is still cracked from frost, and then roll it. Gas lime will be beneficial to fruit trees and vines, but must be used sparingly, especially if fresh; say about twenty bushels to the acre, harrowed in. Your vegetable garden would be benefited if treated just as proposed. We should be pleased to hear from you often.—Ed.]

Mr. Editor:—A subscriber would respectfully ask for a list of good pears, that when properly ripened exhibit the most beautiful appearance, say a clear yellow hue; and if added to this they possess a red cheek, so much the better. Pears with beauty and size, though only of secondary flavor, will frequently command attention, when those of better flavor, but of a green or dull color, would be overlooked.

[In response to our Baltimore friend, we append a list of a dozen pears, possessing a good yellow hue, and often a red cheek. They are all good kinds, many of them ranking among the best, and mostly good growers and productive; yet they are hardly the dozen we should select for market purposes. The remark of our correspondent, however, that a handsome pear of secondary quality will generally sell better that one of first quality without an attractive exterior, is generally true; yet there are pears of good size and fair form, but of rather a dull color, that sell well and bring high prices, because of their great excellence. The public taste is becoming yearly so much more appreciative, that we deem it wisest to plant only the best and most productive kinds, without much reference to their color. The list called for is as follows: Bartlett, Tyson, Bergen, Golden Beurré of Bilboa, Beurré Clairgeau, Beurré Superfin, Lawrence, Buffum, Beurré de Montgeron, Onondaga, Osband's Summer, Pratt.—Ed.]

P. S. Several subscribers interested in the culture of Evergreens, would be pleased with a list of about twenty varieties, of the newest and most distinct that are sufficiently hardy for this latitude.

Baltimore, Oct. 8, 1862.

[It would not be easy to make out a list of twenty entirely new and distinct evergreens that are known to be sufficiently hardy to recommend. The following may be relied upon in your locality, some of them, however, not being what may be termed "new :" Cupressus Lawsoniana, Pinus Austriaca, P. Benthamiana, P. ponderosa, P. Jeffreyi, P. Moritmia, P. Beadsleyi, Chamæcyparis thurifera, Thujopsis borealis, Abies lasciocarpa, A. clanbraziliensis, A. morinda, A. Pattonii, A. Menziesii, A. grandis, A. amabilis, A. Douglassii, Taxus Dovestoniana, Cephalotaxus Fortunii. To this list we will add the Golden Yew, and the following Arbor Vitæ : Gigantica, Lobbii, Craigiana, Glauca, Menziesii, Hoveyi, Compacta, Aurea.—Ed.]

Mr. Editor :—I am pleased to understand that we are not all included in the category of swindlers. I freely admit the justice of the remarks in your last number, and for one am ready to put my shoulder to the wheel to get the fraternity out of the mire. I have long been aware of the disgrace brought upon us by the misconduct of some nurserymen, and confess that I feel ashamed of the business when its operations have the names of * * * * and * * * associated with it. But there is one source of evil which, when understood, will relieve some of us from these severe charges. I mean the tree pedlers. These men buy up old and refuse nursery stock, and hawk it about the country as the products of our fruit cultivators. This stock, though often of good quality, becomes deteriorated by transportation and is often dead and worthless when delivered at the distance of hundreds, or perhaps thousands of miles. Again, pedlers take orders as from a celebrated nursery, and then purchase where they can get their stock the cheapest. This explanation seems to be called for, though I am anxious as any one else to brand the swindler in such plain characters that all may know and avoid him, and to that end, I approve the suggestions to form the protecting association.

Nurseryman.

[It is understood, of course, that the class of men referred to are only a small minority, and form the exceptions. There are no more respectable body of men in any business than our nurserymen; but it is none the less desirable that the bad should be known and weeded out.—Ed.]

P. B. Mead, Esq.—*Dear Sir :*—I have a number of plants in my little garden, which have given me so much pleasure, and such a profusion of fine flowers all the past summer, that I do not wish to let them die, now that winter is coming on. I have not room in the house, and shall have to protect them in some other way.

A friend suggests that a "cold pit" would answer the purpose, but cannot tell me how such a contrivance is to be made. Having seen in the HORTICULTURIST your very plain answers to questions of your correspondents, I have concluded to ask if you can enlighten me on the above subject. Also, please tell me if such plants as Geraniums, Verbenas, Heliotropes, and Petunias can be safely wintered by such means. I am still very green in all matters pertaining to Horticulture, but hope to improve in that respect by becoming a diligent reader of your magazine.

A NEW SUBSCRIBER.

New York, Oct. 18, 1862.

[It is easy to see that you are on "the royal road to learning," which is for all to travel who will, except royalty itself. A cold pit should be located in a place as much as possible sheltered from all northerly winds. It may be of any dimensions desired; let us suppose it to be six wide and twelve long. If you already have sashes, make the dimensions to suit them. It should be dug from three to six feet deep beneath the surface, according to the kind of plants to be wintered; Camellias, Roses, and other tall growing plants requiring more depth than Verbenas and the like. The frames should be twelve inches high in front and fifteen to eighteen at the back. The earth taken from the pit should be used to form an embankment around the frame, first putting next the boards a layer of straw. It requires an illustration as well as a minute description to make the whole thing plain, and in our next you shall have both. There are many others seeking the same kind of knowledge. The pit must be well covered in severe weather, and ventilated whenever it is pleasant. Very little water will be needed.—ED.]

NATIVE GRAPES.—P. B. MEAD, ESQ.—Opening Downing the other day, I was struck by his description of the Concord.

"Skin rather thick, with more of the native pungency than the Isabella, which it resembles, but does not equal in quality."

Surely, Mr. Downing must have had a poor sample, or it has improved much since then. The quality is partly a matter of taste; the thickness of skin, part of it one of fact. And I beg to say, that of eight kinds I have growing, the Concord this season had the *thinnest of any.*

I can not find the "native pungency" when fully ripe. If I were limited to one vine, I should be puzzled to decide between it and Delaware. With me, it was ripe October 1st, ten days after Delaware, and ten ahead of Diana, Rebecca, Catawba, Anna, Isabella, and Herbemont, which I rate in the order they are placed.

Delaware.—The talk of Delaware being a "feeble grower," I think, may as well be given up. With me this season (third one) it has made strong shoots of ten feet of well ripened wood.

The size can be nearly doubled by thinning, if wished, though I do not think its

smallness an objection, if eaten as my little girl taught me they should be, bitten, gnawed, from the bunch; not picked one by one with the fingers.

October 20, 1862. BROOKLYN.

[We have no doubt that Mr. Downing has accurately described the Concord as he had it before him. When it first came out it was very pungent and musky, and is so still in some places, and under indifferent treatment. Thickness of skin depends a good deal upon culture; much more so than grape growers seem to realize. We have eaten Isabellas with the skin almost as tough as leather. Good culture will render the skins of many grapes tender, while neglect will toughen them. This is not so with all kinds; because nature has put a hide on some which she never intended should be susceptible of such influences. You can put the *ergo* to this, if you like, and conclude that you grow your grapes well. Do it. The "feeble growth" of the Delaware has at last become a very feeble argument; it will soon die out. Good vines, under good treatment, always make a good growth, if you will excuse the alliteration. Your little girl knows how to eat Delawares. A friend recently told us that his family eat them as they do green corn from the cob.—ED.]

ADDRESS OF PRESIDENT WILDER.

IT has been the custom of Mr. Wilder to present an address at each opening of the American Pomological Society. These have always possessed a degree of excellence; but the last is the best of them all, and we make room for it with much pleasure. It is eminently suggestive. We invite the reader's attention particularly to those parts relating to meteorological influences, the thinning of fruit, and the production of seedlings. They all present deep food for thought.

GENTLEMEN OF THE AMERICAN POMOLOGICAL SOCIETY:—Once more a kind Providence permits us to assemble for consultation, and the friendly interchange of experience in the ennobling and delightful art to which our Society is devoted. Once more I rejoice in the privilege of taking by the hand, so many of the distinguished cultivators of our land, with whom I have enjoyed sweet intercourse for a long period of time, and from whom I have received so many tokens of confidence and regard, during the twelve years of official service in this chair.

In behalf of the Massachusetts Horticultural Society, at whose invitation we are here assembled, I extend to each of you a cordial welcome to this place, to

our hearts and our homes. You come from different, and in some instances, from distant sections of our country, and some from lands better adapted for the cultivation of many kinds of fruit than ours. But true to our own instinct, and to the spirit of our venerable fathers, the founders of New England Pomology, we have brought up specimens of the progress which has been attained by us in this region. The first seeds of our fruits were planted by the colonists of Massachusetts Bay, in the year 1629. Soon after, the Colonial Legislature granted to John Winthrop, then Governor of the Colony, a section of land, on condition that he should plant thereon a vineyard and orchard, which grant received its name from his official position, and has ever since been known as Governor's Island, in the harbor of Boston. About the same time, Governor Endicott, of Salem, planted the first pear trees in that place, one of which is still living and bears his name. Precisely what the intermediate progress may have been we are unable to state. But after a space of a century and a half, we find in the Boston Gazette of March, 1770, the following advertisement of the gardener of the immortal John Hancock, the first signer of that memorable instrument, the Declaration of Independence:—

"To be sold by George Spriggs, Gardener to John Hancock, Esq., a Large Assortment of English Fruit Trees, grafted and innoculated of the best and richest kind of Cherry Trees, Pear Trees, Plum Trees, Peach Trees, Apricots, Nectarines, Quinces, Lime Trees, Apple Trees, grafted and ungrafted, and sundry Mulberry Trees, which will be fit to transplant the next Year, and Medleys."

To these worthy men, and others of more recent date, whose labors inspired our fellow citizens, may be traced the interest which, in the year 1829, originated the Massachusetts Horticultural Society; and, through the agency of this first Association, introduced into this section the results attained by Van Mons, Knight, and other European pomologists. Thus was here laid the foundation, upon which the science we seek to promote has advanced to a rank not inferior to that attained in any other country in the world.

DECEASED AND ABSENT MEMBERS.

Since our last biennial session, one of the founders of the Society, who held official positions from the organization of the Association, has been removed by death to another, and, we trust, happier world. I allude to the decease of Hon. Samuel Walker, of Roxbury, Massachusetts, who died at his residence in that city, on the 11th of December, 1860. His death has made a large breach in our pomological circle, and deserves special notice. Mr. Walker was one of the earliest and most valuable members of the Society,—for many years a Vice President,—and, at the time of his death, Chairman of the General Fruit Committee. For nearly thirty years Mr. Walker has been deeply interested in the advancement of horticultural and kindred pursuits, and had held the offices of President and Treasurer of the Massachusetts Horticultural Society. Few men have taken a

deeper interest in the welfare of our institution, or in the objects it seeks to promote. He was ardently devoted to its progress, and until our last session, when declining health prevented his attendance, he was present at all previous meetings, and took a leading part in all our deliberations and transactions. It was upon his suggestion that a special Committee was appointed for the revision and classification of the Society's Catalogue of Fruits, with special reference to their adaptation to the different sections of our land.

As a man, Mr. Walker was quick in perception, ready in debate, refined in taste, courteous in deportment, conscientious in duty, exemplary in life, peaceful and happy in death. But his record is on high, yet in our memories his name shall stand enrolled with Downing, Ernst, French, and other kindred spirits, who have ceased from their labors on earth.

While we drop a tear of grateful remembrance over our departed associates, we would not forget one who still lives.* His infirmity detains him from this meeting, and calls for our sincere sympathies. He also was among the originators of this institution, and for a term he was its presiding officer. Would that we could hope to enjoy his presence with us once again. His cordial salutations, and his constant interest in our Association and its pursuits, have long endeared him to its members. With him the outward man perishes, but we have reason to know that his love of our favorite art, refined and sanctified by his afflictions, ministers to his daily relief and consolation, and makes his declining life tranquil as the twilight of a summer eve.

PROGRESS.

This is the fourteenth year of our Association. Eight years have elapsed since the Society held its session in this city. Most sincerely do I congratulate you upon the attendance at this meeting. But while I gratefully acknowledge this favor, I should be delinquent in duty did I not also allude to the absence of many others dear to us as co-laborers, and eminently useful as members of our institution. Some of the States, heretofore represented in this Association, are now engaged in a sanguinary struggle against the General Government; and as one among the many painful casualties of this most unnatural and fratricidal war, we are now deprived of the presence and co-operation of our Southern members. But we still hope for their return to us in allegiance and fraternal love, and for their reunion with us, leaving no sting in the heart of memory, no stain on the wing of time. Yes, even in this dreadful conflict, we will still cling to the hope that, like ourselves, they will stand firm by the principles of Constitutional Authority, and the American Union.

But we are not here to discuss the present state or future political prospects of our country, dear to us as life is dear, except as they are connected with the great objects of our Association,—objects powerfully contributing to individual happiness and national welfare. Our past success is a matter of sincere congratulation

* W. D. Brinckle, M. D., of New Jersey.

to all who live upon our soil. The errors and ignorance of former days are fast yielding to the progress of truth and the march of intelligence. We have the most gratifying evidence of the extension of pomological enterprise and knowledge.

Our Society has already accomplished a great good in correcting the nomenclature and classification of fruits, in rejecting numerous worthless varieties from its Catalogue, and now, by a revision of the same, presenting a list of those adapted to the various local districts of our widely extended country. The advantages which will arise from this in the future, improved as it will be from year to year, can scarcely be too highly estimated. The Committee who have charge of this responsible and arduous duty, especially the Chairman, have labored with great diligence, and I have no doubt that their efforts will be highly appreciated by an enlightened and grateful community. In connection with this progress, I respectfully recommend that the Committee on Rejected Fruits be authorized to present, at the next biennial session, a list of such other varieties as, in their opinion, may be dispensed with. I would also suggest the propriety of establishing some permanent Rules of Pomology, especially in reference to the naming of seedling or other new varieties which may from time to time come to notice.

REVULSION OF 1860, '61.

The consumption of fruits has become so common as to constitute one of the most important articles of daily food. The loss of a crop is now deemed as a great public calamity; its abundance as one of the greatest blessings, adding immeasurably to social health and comfort, and to the wealth and commerce of the country.

It becomes, therefore, my duty to record in the Volumes of our Transactions a remarkable fact, which has occurred since our last session, namely, the general failure of the fruit crop for the year 1861. In history, this, as a great national calamity, will be associated with the civil commotion that at the same time convulsed the whole land. What causes, if any, may have produced this remarkable coincidence between the vegetable and the civil kingdoms, we may not be able to discover. Manifestly, "time was out of joint;" both heaven and earth seemed to frown upon our happy land. In regard to our fruits, a kind Providence has brought about a renovation and restoration, which makes the present year as remarkable for excellence and abundance, as the former year was for the injury and loss of the crop. Oh! that this golden harvest in the natural kingdom may prove the harbinger of a more glorious one of peace and prosperity to our bleeding country.

The causes of the singular phenomena, and the loss of the fruit crop of 1861, have been variously described. Disasters of similar character, though not generally so severe, have occurred in the vegetable world in past time, and in different locations and latitudes. Cycles, of favorable and unfavorable seasons, have checkered the history of Pomology, and made occasional mutation almost as cer-

tain as success. It is well, therefore, to note carefully the facts connected with these great revulsions, and to report them for future guidance and instruction. Especially, in a National Association like our own, should these be recorded for the benefit of generations which are to follow us. Thus shall we treasure up lessons of the past, and gain wisdom for the future.

Vicissitudes attend the cultivation of trees as well as other vegetable products. In regard to the one under consideration, we may mention the fact, that so general was the injury throughout a large part of our country, there was but little fruit in the year 1861. The previous autumn had been marked with an early and very severe frost. On the morning of October 1, 1860, the mercury fell in the vicinity of Boston to twenty four degrees Fahrenheit, causing the apples and other fruits to freeze on the trees, and, in some instances, to burst open. This was the most severe of any on record, so early in the autumn. Again, on the morning of February 8, 1861, the mercury fell in several places around Boston to twenty-five degrees below zero, a degree never before recorded at this season. The previous day had been mild and pleasant. Again, early in the month of March, the fluctuations of the mercury were equally astonishing. The third day was warm and delightful; the thermometer at Dorchester, four miles from this city, stood at seventy-five degrees at two o'clock, P. M., and at eight o'clock at sixty-five degrees; and although no very severe cold succeeded immediately, yet on the morning of the 18th inst., the glass stood at zero. These extremes of temperature were most unusual and unnatural, and not only destroyed the crop of fruit, but injured many trees past recovery, especially peaches, plums, and cherries. These vicissitudes serve to illustrate the comparative vigor, hardiness, and power of endurance in some varieties of the same species, and develop different degrees of susceptibility in others, and thus furnish most useful information to the cultivator.

From this experience we deduct the fact, that some varieties of the pear are even more hardy than the apple, a fact which a little reflection will contain. Thus among the few pear trees which here bore abundantly in 1861, were the Vicar of Winkfield, Louise Bonne de Jersey, Urbaniste, and Belle Lucrative, while the apple, and most other varieties of the pear, failed of a crop. With me, during the last thirty years, the apple has many times failed, while these varieties of the pear have produced fruit annually.

Whether the cause of the revulsion just noted was the frost of October, 1860, destroying as it did the germ of some of the flower buds of trees and shrubs, or whether the sudden alternations of heat and cold in the winter and spring of 1861 produced this result, or whether, as seems more probable, it is to be ascribed to these two causes combined, we cannot with certainty decide. If there were some localities in which this injury was less, it is not unlikely that circumstances which affected one region might not be so active in another. The effect of a bright sun, or of keen, dry piercing winds, immediately succeeding the frost, would intensify

the damage; and, on the contrary, a cloudy sky and humid atmosphere would modify and ameliorate it. But my object is not to discuss at length this subject, but only to record the facts in our National Annals, for the information of physiologists in our own and other lands, whose professional business is to observe these freaks of nature, and to give us their philosophy in the case.

Upon the observation and study of these and similar facts the progress of Pomology eminently depends. The different ability of varieties to resist heat and cold and other meteorological agents, reveals a most wonderful analogy between the vegetable and animal kingdoms; for while certain animals find their natural home in the frigid zones, others in the temperate, and still others in the torrid, there are some that are cosmopolites. So with our fruits; some are suited to one location, some to another, and a very few flourish in a great variety of latitudes.

But as to the means of protecting our fruits from these injuries, we need more knowledge. Experience teaches us, however, that shelter and aspect have a powerful influence, especially on certain varieties.

As to aspect, I am more and more convinced of its importance. The Belgians, in their descriptive Calalogues are accustomed to designate the aspect most favorable to each sort; and when we shall be able to do the same, we shall have attained a result most eminently desirable.

In regard to shelter, here in the North, so as to protect our trees from currents of fierce drying winds, which are as equally injurious to vegetation as a parching heat, no one can doubt its beneficial effect. The influence of shelter and aspect is more perceptible in some varieties than others. This is seen in the fact that certain kinds are healthy and beautiful on fences or in sheltered places, while they are worthless elsewhere.

These considerations all teach us the vast range of our science, the great number of secondary causes that modify results, and consequently the imperative demand for extensive research, for the accumulation of ripe experience, and for great patience and vigilance in the pomologist. How many sad mistakes are developed every year, by leaping from partial observations to general conclusions! Witness the frequent errors of cultivators. How often do they condemn the qualities of certain varieties before they have tested them at mature age. They cut off and graft their trees with other sorts, instead of waiting for nature to do her work in her own proper time.

Witness, again, the complaints against the hardiness of particular kinds, which have arisen from the fact that they had not passed the vascillations incident to youth, and attained a sufficient degree of age and solidification of tissue, in bark and wood. This may be seen in the numerous injuries sustained by young trees of luxuriant growth. They are subjected to the vicissitudes of climate, some years only recovering what they have lost in the preceding in health and vigor. But having overcome the trials of this early period, they rise above these enfeeb-

ling causes, and shoot up into a mature manhood, and thereafter are less liable to the fluctuations of temperature.

But the demand for thorough and patient investigation, is still further exhibited by the wonderful phenomena and mysteries of the vegetable kingdom. For instance, why does the peach, which first puts forth its leaf, delay its florescence until after that of the apricot, which blossoms first, and then puts forth its foliage? Why does the Easter Beurré clothe itself in white robe of bloom before the early varieties of pear, and yet be the very latest to mature its fruit? Why has the fruit of the St. Germain pear, which fifty years ago in this locality was fair and fine, become an outcast, while the wood and foliage appear fair and healthy? Why does the Van Mons Leon le Clerc tree, whose bark is commonly so cracked and cankerous as to eat into the very heart of the wood, frequently produce large and beautiful fruit? Why, in this favored year, should some of the Doyenné Blanc trees produce fair and fine fruit, while on others by their side it is blasted and worthless? Why should the same tree, bearing two sorts, produce on the one branch these large, fair, and ruddy specimens,* and on the other those which are spotted, cracked and blasted, like that in my hand,† and yet the tree, in all its parts, be equally vigorous and healthy? Why should the Beurré d'Aremberg pear, formerly so good in this region, but for many years inferior in fruit, and even diseased in its wood, the present year, resume its pristine excellence? These are indeed mysteries which we do not at present comprehend; yet far from abating, they should actually increase our ardor in the pursuit of knowledge.

How obvious, then, is it, that he who would become an eminent pomologist, must be a diligent student of nature, and carefully observe the facts which she brings to his observation. With pencil and book at hand, he should note the thousand little things which arrest his attention in his daily labors, and make them subjects of future reflection and study. At first they may appear of trifling consequence, yet in this way they may lead to the most important discoveries, in respect to the hitherto concealed processes of vegetation. If all would unite in this work, and steadily pursue it for a course of years, recording such meteorological and other facts as they are able to make, together with personal observations as to their influence upon vegetation, we might soon learn therefrom the most salutary and practical lessons.

* Oswego Incomparable. † Summer Bon Chretien.

[*To be continued.*]